

Botany.
Journal



1838.

Octr.

18th

Went for a walk at Fort Snelling along

the Mississippi River

No 1 - 4



Fort Snelling from the East.

1858. Found St Louis up the Mississippi.
May 4th from St Louis at noon - Weather
attoh on the north side of that river.

18.

- 1. Verbena spicata
- 2. " " perfoliata
- 3. Saponaria?
- 4. " " "

5. Barberia glauca
Obs. On the first ground I have with a spruce
fir tree stand to with Quercus velutina & Cedar
butcher -

May 19. Weather, foggy towards morning, clear & sunshine over day; arrived at Clarksville 9 o'clock; 12 o'clock at Louisiana; 5 o'clock at Plannihah; 8 o'clock at Marion City and about 9 o'clock at Quincy.

- No 7. *Valix nigra*. appears at Hamberg first
 8. *Asarum canadense* in bloom again.
 9. *Geranium maculatum*.
 10. *Ranunculus pedatifidus?*
 11. *Actaea alba*.
 12. *Galium aparine*.
 13. *Anemone 3-phyllum*.
 14. *Corydalis aurea*.
 15. *Anemone nemorosa*.
 16. *Sonchus balsa mitae*.
 17. *Rhus aromatica*.
 18. *Veronica* sp.
 19. *Rumex* sp. River banks at Louisiana.
 20. *Stylium verna*.
 21. *Rumex crispus*.
 22. *Poa* sp. with *Aquilegia canadensis*.
Phlox diffusa or *Lychnis* sp. *pearlfl.*
Sanguinaria canadensis on the hill side at
 Louisiana, on carboniferous limestone
 rocks. *Acer* & *Cottonwood* ~~fruits~~ flying —
 scattered on the river banks.
 23. *Amsonia salicifolia* with
Lepidanthus occidentalis — *herb*
inex *crispa* — *Pyrola coronaria* *bottle*
rotundifolia — and the
multifida *petiolaris* covered with
Antennaria *cordata* *spicata*
 24. *Martius echinatus*.
 25. *Oreites spectabilis*.
 26. *Cypripedium*.
 27. *Anemone aconitifolia* *sinuata*
 28. *Uvularia* *op.*
 29. *Sanicula marylandica* *spicata*

5

May 20. Fine weather, clear & sunshiny, very warm.
South west wind - 6 o'clock morning at Fort Edwards,
past the mouth of Des Moines River & foot of the
rapids - 7 o'clock ~~Fort Des Moines~~ - Keokuk villages
10 o'clock Fort Des Moines - 11 o'clock Fort Madison,
about 12 o'clock New Albany - at 4 o'clock still at
Burlington W. I. - 8 o'clock at Oquakwas -

Obs. Cedars appear on the rocky banks of the river
at Fort Edwards - Amompha fastigiata at Fort Madison
on high barren banks with *Astroagalus* *Lamottei*. A reddish
clay extends along the banks at Oquawka. - The timber of
less size & vigor - Large open barren prairies
on both sides - *Salix*, *Quercus* & *Ceris* in blossom.
The country along the river we passed to day was
generally high and barren prairies with little or
no timber, or inundated bottoms. - The many island
are thickly covered with willow, poplar & Maple.

May
21.

Last night we had very warm & a shower in the distance. - This morning the wind blew from the north; cloudy & but little sunshine over day. - From 7-8 o'clock at Rockville, Stevenson & Rock Island, vegetation considerable back, - *Polygonum coronarium* in blossom also *Syringa vulgaris* in a garden at R. Island. Appearance of the country on the east side barren with open prairies & little timber, the river bank on that side high & rocky 20 miles up to the Meidori opposite Camanche, here the opposite side presents again a high & sterile prairie, ^{slightly} ~~at~~ higher up, on the eastern bank ^{also} on a prairie. Again *Betula rubra* along the banks & borders of the woods, - On the western banks 45 miles below Galena in the woods:

31. *Viola cucullata*.
32. *Oxalis violacea*.
33. *Enigeron bellidifolius*.
34. *Canex* sp.
35. *Polygala seneca*.
- 36.
37. *Umbellifera*.

May
22.

Arrived at Galena at 11 o'clock last night. On the same stone hills (rocks) at the lower river.

38. *Acerius cocinea?* 39. *Zanthoxylum frax.*
40. *Aralia?* sp. (not in bln.). 41. *Crataegus pauciflora* ^(not in bln.) with: *Genium maculatum* - *Adiantum pedatum* - *Hedysarum* ^(not in bln.) *Clymene* - *Triostium perfoliat.* - *Thelypteris* sp. - *Tia-*
nella cordifolia - *Aegleum ebneri* - *Polygonatum* ^{multifl.} - *Viola cucull.* - *Asclepias purpurasc.* - *Spiraea aquatica* - *Menyanthes trifoliata* - *Drimus chickasaw* - *Rhus typhina* - *Aquilegia canad.* - and on the naked top *Baptisia tinctoria*.

5 miles below Du Bugue - West bank -
high rocky Woods -

42. *Staphylea* 3-foliata. - 43. *Asarum* ^{strobiliferum} _{caudatum}. - 44. *Viola cucull.* B striata. - 45. *Dentaria laciniata* ^{tortuosa}.
46. *Phlox divaricata*. - 47. *Viola Wahlenbergiae*.
51. *Hepatica contorta*. - 52. *Mitchella diphylla*.
53. *Uvularia perfoliata*. 54.

Der Bugue at 3 o'clock. On the high limestone
stone hills.

48. *Balsamia hispida* - 49. *Viola palmata*.
50. *Syringa mollis* am. sp. with: *Potentilla* ^{angusta} ~~angustifolia~~ - *Balsamia* - *Phlox pilosa* - *Viola palmata*.

About 30 miles below Prairie du Chien - West
side, high limestone rocks -

55. *Crataegus aquifolius* - 56. *Anemone?*
57. *Quercus* ^{sp.} - 58. *Quercus* sp.
59. *Lycopodium perfoliat.* - 60. *Erythronium*?

61. *Dodderathion Meadia* - 62. *Cornus* ^{intermedia} ~~intermedia~~
- Obs. To day we have past through a rich & well
montane country - Bottom filled with large timber, & not so
frequently inundated. - *Betula* more frequent on the banks
of lakes in bloom. - Weather fine N.W. Wind - very cold in
the morning. -

May 23. Arrived at Prairie du Chien early in the morning and remained there until 3 o'clock afternoon. Weather clear & sunshine N.W. wind. We made an excursion to the bottom prairie & limestone hills east side of the river.

63. *Aralia nudicaulis* 64. *Scolopendria pectinata*
65. ~~Thelypteris~~ *Trichomanes* 66. *Euchromia grandiflora*
67. *Pedicularis canadensis* 68. *Anemone ludoviciana*
69. *Aceridium* (*trabis* sp.) 70. *Apennia?*
71. *Gnaphalium plataginifolium* 72. *Viola pedata*.
73. *Ceanothus americanus* 74. *Aralia nudicaulis*.
75. *Imaginaria foliolum*. 76. *Aconitum polyphyllum*.
77. *Baptisia tinctoria* 78. *Smilax peduncularis*.
With: *Cannabis americanus* — *Smilacina racemosa*.
Cypripedium parviflorum — *Euchromia corneana*. — *Polygalas* several — *Anemone thalictroides* — *Convallaria* small-flowered —
Aquilegia canadensis — *Saxifrage balsamitea* — *Batis hispanica* — *Fragaria palmata* — *Vitis circinata* — *Hedysarum* 3-foliate — *Potentilla arguta* — *Spiraea apulaefolia* — *Betula alba* — *Lathyrus* sp. — *Corylus*, *Rhus* &c. & 79 *Pyrus*
~~Atroviridis~~ sp. — Those mark with — are from the bottom prairie
the rest from the rocks. — The old large timber
white & (black oak?) On the opposite side fine timber.

May 24. Passed mouth of bad-ax river at 8 o'clock. — In the afternoon we saw several Indians on the east side of the river, from the Wapashée nation, and passed three miles off, from their village at 3 o'clock. — On the west side of the river, partly inundated, we found 80 *Equisetum uliginosum* which covered the bank, — ~~Betula~~ ^{Betula} ~~Fagus~~ & ~~Taxus~~ ^{Taxus} inns. over of considerable size but few *Ulmus* & *Platanus*. — *Betula alba* & *Pinus strobus* over the naked rocks but little. The river narrower & high banks frequently on both sides, bottoms more elevated. Cool weather, little sunshine, N.W. Wind.

May 25. At 6 o'clock we reached the lower entrance of lake Pepin; after sounding we obtained bottom at 7 and $6\frac{1}{2}$ fathoms; width of the lake one mile; - 7 o'clock obtained bottom, 6 miles from the ~~bottom~~ entrance 7 fathoms; - 7 miles from there $9\frac{1}{2}$ f.; - 2 miles below Lovers leap, 7 fathoms, - 1 mile further 7 fathoms & $6\frac{3}{4}$; - 1 mile below obtained $6\frac{1}{2}$ & 6 fath. - off again 100 yards east from; $6\frac{3}{4}$ & 7; - off Rush-River at 3 past 9 o'clock, we obtained 7 & $7\frac{1}{2}$; - $1\frac{1}{2}$ mile further up, $8\frac{1}{4}$; - 2 miles below the upper end 3 & 3. - On the point at Lake Pepin on the land we found:

81. *Salix alba*? 82. *Gaultheria procumbens*, caespitosa, erecta,
ramosa, quadrangularis-pubescente. - folia
4-verticill. lin. lance. subacut. 3-
nervibus, mag. revolut. sedbris, sub
tus pubesc. floribus terminali. (?)
83. ? *Auriculus*
84. ? *Auriculus*
85. *Aceridium* (Rosaceae) 86. *Cerasus depressa*
- 11 o'clock first village of the Sioux on the
elevated bank west:-
87. *Caltha palustris* 88. *Ribes floridum*
89. *Lathyrus* sp. 90. (Rosaceae)
91. *Ribes triflorum* & 92. *Cenomone conallifera*
in the bottom on rotten wood, - 5 and 6 o'clock
2 villages of the Sioux. - High rocks along the
east side, partly of the west also - ~~little pine~~
beautiful white pines & birches on the rocks. - near
St Peters which we reached at half past 8 o'clock
in the evening. Weather beautiful, warm, cloudy in
the afternoon, rain at night. - W.

[10]

May 26. At St Peters. we were engaged in removing
our baggage &c from the st. boat. Weather
fine in the morning, & cloudy & rain in
the afternoon & evening. N.W.

27. Sunday - cold & rainy weather high & W.
wind.

On right road off Pine Island near St Pe-
ters -

92. *Viola canadensis*. 95. *Fritillaria* plants
93. *Ribes cynosbati*? glabres. latus 3 petal. (pedon
94. ovato) ovat. acum. nerv. lineo-
corollas 3 petal. alba; petalas
obso. acum. undul. recurv. filam. brevissim. interrall.
ovario hexagon. (bas) inserta in
anthiane. lobus 3 petal.
revoluta & ovario subcic. fol.
fern. 3 sess. divaricatis, rhomb.
pet. ovate acumin. nervis pet.
latis. confluent.

Woods 1. *Tilia alba*. a. *Fraxinus*. b. *Betula alba*
Populus d. *Fagus sylvatica*. e. *Unguicularia*. f. *Acer* No-
gundo. g. *Zanthoxylum*. frax.

or under shrubs. 1. *Cornus alba*. a. *Viburnum*
b. *Staphylea* 3 fol. c. *Prunus* oblonga? d. *Ribes floridum* - e. *Ribes* 3 florens. f. *Urtica* verticillata.
* Herbs. 1. *Silene* bifolia. 2. *Fraxinella*. a.
Avicularia perfol. b. *Fragaria*. c. *Polygonum* multifl.
d. *Anemone* 3 phyllans. e. *Viola Muhlenb.* f. *Hydrophyllum* append.
g. *Actaea* alba. h. *Erythronium* dens. i. *Sanguinaria* canad.
k. *Lycopodium* praevidens. Lime stone.

Trees on the rocky heights. 1. *Auriculus* alba & *Tayza*.
a. *Betula* alba. - Shrubs. 1. *Fragaria* amer. b. *Cornus* alba.
* *Aleurothrix* amer. * *Prunus* serot? - Herbs. - 1. *Pedicularis*.
canad. a. *Bartsia* hisp. b. *Fragaria* virg. c. *Geranium* macul.
d. *Thessalia* umbell. e. *Thlaspi* nai. f. *Viola* variegata & palmata. g. *Artemisia* sp. h. *Statice* sp.
i. *Solidago*. k. *Grapholita* plantagineum.

Deep on high moist places in the Woods.
96. *Equisetum palustre*. 97. *Anemone nemorosa*.
[11] *nemorosa*.

St. Peters.

- May 28. *Mayakidionanthus capillus* - b. *Osmunda interrupta*.
Cypripedium spectabile * d. *Equisetum uliginosum*?
Shady & dry. *Anemone* 5 fol., 2x *Anemone monosperma* a, *Pyrola elliptica* b. *Houttuynia americana* d. *Hepaticaria* lobata.

In the water borders of lakes 9 & 8. *Carex* sp. Culms
 triangular, fol. vern-acquante. flor. monoccid, sub-paniculata
 foliis aestiatis ligulatis longissimis. marginis
 retrorsus verberinis, vagini glandescentibus.

Rocky Prairie. Height situations. Pilot Knob.

99. *Astragalus conyzocarpus*? 100. *Bartsia longiflora*.

101. *Geum* sp. fol. interrupte
 pinnatis. hispeditis, supra
 pilosae - stipul. lat. rubescens.
 pedunc. part. 2 stipitat, floribus
 pendulis; calyx 10 part. sep. exsert
 lani. acut. diverg; inter. clausa
 ovat. acum, sanguineus. corolla
 (clausa) roseo-alba petal. lanceol.

On the top of (limestone) high Prairie Pilot Knob.
 1 *Anemone ludoviciana*. 2 *Bartsia* sp. fl. ex obtusa
 galus conyz. b. *Bartsia longifl.* c. *Geum* sp.
On the slopes 1 *Viola pedata* (abundant). 2 *The*
turn umbell.

Weather clear & beautiful. N.W.

St. Peters.

- May 29. Heavy rain. Cloudy entire evening. E.
 Rainy, cloudy, sunshine N.E. heavy rain at
 night. S.E., on the rocky banks of the Mississippi
 102. *Corydalis aurea*. 103. *Cyathea (Kanonicus)*

There is as great variety of colors in the
Viola pedata in different situations - This
 side of St Peter river (on the right) especially
 I counted 10 different varieties of colors, from
 yellowish-white & bluish white (milk color) gra-
 dually deeper to a deep crimson-violet,
 which last one is extremely beautiful and
 more rare than any others - in many places
 they are so dense, and as they arrive at
 blossoms all at once, the hill sides are blue
 as the brightest sky, or still more beautiful
 - I found it remarkable that in the midst of
 those millions of violets (*Viola pedata*) I did not
 notice a single individual of *V. palmata*, whe-
 ther among them, nor in the immediate neighbor-
 hood, the cause of it ~~is~~ I believe is the soil.
 The *V. palmata* seems to be more or less confined
 to alluvial bottoms & limestone formations,
 the *V. pedata* more or less to a primitive de-
 posit and to more elevated situations. On the
 left bank side of the St Peter River near the

May
31.

St. Peters.

On the high Prairie around the Fortress.

104. *Euchroma coccinea*. with *Ped. canad.*, **Polygala seneca*, **Viola palmata*. *Ascyrs* sp. **Genn. macul.* *Osmunda cinn.* *Ceanothus* - *aner.* *Viburnum pr.* *Viburn. oxyococcus*.

- Rocky swamps on the high prairies, covered with different kinds of willows, ^{20 feet} *Prunus* obov. ^{8 ft.} *Rhus* oval. ^{6 ft.} *Populus* tr. muled ¹⁸⁻²⁰ and 116 *Salix fuscata* ¹²⁻¹⁵. - around the margins different species of *Carex* with *Iris* & *Acorus*. & *Eriophorum* & *Spiraea* *Salicifolia*.

106. *Carex* sp. 105. *Eriophorum*

107. *Carex* sp. 109. *Carex*.

- up to the high rocky banks of the Mississippi. 110. *Negundo fraxinifol.* with fruit 18 feet.

111. *Cerasus nigra* Del. (?) 8 feet.
with *Rhus typhina* (12) *Fraxinus*. white & black oaks of middle size. *Roses* & *Symphoricarpos* the most frequent underbrushes also *Rubus* & *Cornus*. Herbs *Triosteum* sp. *foliat.* *Viola* cap. - On the banks: Old cedars & white pines, birch, oaks of less size. The naked margins of the rocks is covered with a species of *Artemisia*, glaucous & suffruticose, probably *frigida*, not in blossom, with it we found -

112. *Arenaria laterifl.* Hock. 113. *Trabis* sp.

114. *Arabis* sp. 115. *Cardamine rhomboid.*
(bottom swamps.)

On sandy heights in the Prairie 108. *Batshia gmelinii*.
with *Viola pedata*. - *B. hispata*
Menisperm. canad. & *Humul. Lap.* the only climb. in the Woods.
Weather fresh. N.E. cloudy and sunshiny.

[14]

June

St. Peters.

1. up to the 9th of this month, we were preparing for our voyage up the St. Peter River.

on hills, probably formed by drift-sand the *Viola palmata* appears among the *V. pedata* but very few, still closer down to the fortress the *Viola palmata* is found appears, in its most common situation & association among hazel bushes, ^{& in} open plains with *Pedicularis canadensis* & *Euchroma coccinea*, The associates of *Viola pedata* are ^{generally} *Geum rivale*, *Euchroma grandiflora* & *Anemone ludoviciana* and sometimes *Batshia longiflora*.

[15]

June

9.

Up the St. Peter River.

From the mouth up, willow & Poplar cover the banks, chiefly *Salix petiolaris* & *discolor*, ~~populus tremuloides~~^{gigantea} and a few *Pseudosasa*— Low plains covered with *Agricaria* 3-4 feet high. — *Salix nigra* continues in the edge of the water 30-40 feet high with *Tilia alba*, *Ulmus fulva*, *Rosa* sp. & *Vitis cordifolia*.

On overflowed ground under *Tribulus*, *Carex*, *Helianthus*, *Lysim.*, *Viola*. 117 *Spiraea pedunculata*, *Thlaspi pratense*, *Thalictrum rugosum*, *Urtica canad.* — At 9 mile creek the bank rise gradually and are covered with fine large timber, *Tilia alba*, *Acer saccharinum* the bluffs are near & covered with grass & seas of *Salix petiolaris* ripe, also the *Acer saccharinum*. Of. to were the elevated banks for some distance covered with *Osmunda cinnamomea* interrupt. *Anemone apertifolia*.

On the Prairie the other side of river
on credit. 118 *Vicia* 119 *Lathyrus*

120. *Jacquemaria maryland.* 121. *Rosa*

122. *Poa*

Weather clear very hot. Temperature of the Air
at 3 o'clock P.M. 86.0. of the River St. P. 70.0. A very
heavy thunder storm at 12 o'clock in the night. We made
18 miles. S.E.

June

10.

Up the St. Peter River.

No variation in the vegetation, which is very
similar. *Pinus pendula* appears in high & dry
swamps, which is also abundant at Lake Cal-
houn & Marriett near St. Peters.

About 8 or 10 miles below the rapids on a rocky prairie

124. *Spiraea racem.* 125. ~~Hedysarum~~ *Phacelia fimbria*
with *Thlaspi* not in abundance, also *Urtica* sp. *Spiraea* sp. *Im-
patiens* sp. *Aspidium filix-mas*, *Dianella erythron-
tis*, *Gypripedium*, *Parviflor.*, *Tanguin.*, *canad.*, *Gaura*, *ma-
calatum*, *Gaura* sp. from acon. *Thlaspi* sp. very
few. *Aquilegia* sp. Very fertile land. Weather
changeable, thunder, cloudy, high wind at the evening.
We made 20 miles.

June

11.

Up the St Peter River.

Near Sandbar Creek above the little Rapids on the limestone ridge beyond the little swamps.

126. *Athyrium*

with Umbellifer. (36) *Athyrium*, *Galium septent.*
At the spring near Sandbar village *Phlox*
divar. & *pilosa*. *Sicyos lobata*? — At the
high bluffs near River Marchaisaux:

128. *Gramineae*

129. *Polygonaceae* with
Balob. Gramineae. No 94. *Arctag. eriocalyx*.
Graph. plant. very much like the flora around
the Pilot Knob. we passed to day several high
Prairies, with little oak timber; the bottoms
contain the same timber we found since we
started off. we encamped at night on the
right bank of the river near a little swamp
or lake opposite the beginning of Round Prairie
found two species of snail shells, *Vicia*
Carex & *Thalia* *Asclepias* and a species
of *Cyperus* which is about 3 feet high & very abundant
Weather fair, clear sky NW.

June

12.

Up the St. Peter River.

130. *Hemionitis?* *Piles* *plana*, margin subnervulato *tacina*
Surfuracea, *nigrescens-fusc.* *centr. imers.* *Sticta* ^{Cruci} *subtrent.*
terete, *solida*, *furfur.* *sticta*, *Lamellis* *collutosis* *confert*.
(*Repul.* *granulatae*.)

The country still of the same appearance
fertile, but little timber, except the bottoms which
are covered with oaks, Elm, white & sugar
maple, and the borders of the river with Willow
& Aspen. Grass high in the bottom prairies
which consist generally of *Carex*, *Vicia*, often
none acornifol. and several of the Compo-
sitae. We encamped in the evening at
Riviere de Vile Marante, and an excursion
through the bottom to the bluff, see form.

131. *Camp. rotundifol.*133. *Gramineae*135. *Cyperus candidus*.137. *Carex*139. *Eriophorum*

132. *Lathyrus*.
134. *Phlox aristata*.
136. *Cyperus*
138. *Carex*
140. *Equisetum*
With. *Polygala seneca* *Bartsch* his. *Galium*
septent. *G. fist.* *Arctag. eriocalyx*. *Pectia* *Cracca*
Cyperipedium parvifl. *Genes.* *macul.* *Phacelia* *fimbriata*.
Fragaria *shrub*. Weather fine, clouds, NW.

13

Up the St. Peters River.

Cloudy early in the morning, from 9 o'clock in the morning rain, which continued until evening N.E. - At 11 o'clock we met with the only rocks on the shore (at the Albert Trott creek) of St. Peter, sandy, salmon red sandstone, river is more rapid, in some bends go 100, and 120 yards wide with several islands and sandbars. We encamped in the evening at the Arrow Prairie from the top of which we had a view of many miles. It contains a great many granite boulders, partly scattered as the hill slopes, coarse gravel. Here we found

141. Hylotelephium erectum 142 Carex sp. and very near the same flora of Pilot Knob St. R. The variety as far as it could be distinguished in this season was as follows: (beginning from the top) Anemone laevigata, Gram. 101., Astrag. ericet. Bistch. hisp. lapp. rotundifolia. Thesium umbell. Petalost. viol. - Senecio balsamites, (No. 70. in ripe leaf). Potent. agnus., Graphal. plant., Sanguinaria 3 foliate. Gram. 133., Amorpha sp. abundant, Lyonia alba ciliata, Huchrea abundant, Lupinus sp. (Tradescant.) Phlox austriaca. Pedicularis canad., Hysopites angust., Eryngium aquat., Viola pedata not abundant., Vicia 118., Scutellaria parvula, Artemisia fl. glaucis. lani. aust. dent. Gentiana crassata and black oak at the foot of the hills Prunus etc. Kasaw. Vitis aestivalis; Equisetum 140.)

143. Agaricus pileo irregularis campanulato, glabro, crebro convexo, vel orbiculato; stipite brevis, crassus, albo-tomentoso; lamellis regulariter excurrentibus, albo-basiginitis. marginae pribi 2-3 pl. On the ground. (The Hylotelephium called by the Indians Chah-ham ~~tak~~ tak-chah, designs the little pea like bulb.) is collected by the Prairie Indians to subsist on through winter, ~~but~~ the Indians gather up their stones and use it for a food for winter, having very much of the taste of beans, when boiled.

[20]

Up the St. Peter River.

144. Agaricus pileo grossa, planelliforme, lobato undulato, albo, marginae subrotundato; stipite ^{lateral} basitextus, lamellis irregulari. Decurrentibus candidis. Ad cortice Salix nigra. fruct. very frequent. On the River bank
144. Daedalea, pileo decomposito lobato undulato albo, luccido-zonato, marginae crispis, lamellis fistulosis, irregularibus. Stipe apicis. Cettis pubescens ^{at White Rock}

145. Vitis riparia. 146. Rubus idaeus.
147. Rhus radicans. 148. Menisperm. Canad.
149. Cornus canescens. 150. Rosa parvifl. R. carolin. Mx. ^{Chit.}
with Prunus Chikasaw. Juniperus virginiana.
Cettis occ. pubescens. Stereophyllum getmanicae.
arrived at 7 o'clock at the Fair of the river. For Congre. at Francois de Lione. (at ^{granular} ^{bottom} limestone of salmon color.) rain at the evening. N. W. (granular sandstone, containing limestone of salmon color.)



Le Roche Blanche.

[21]

Ad. Traverse de Sioux.

June
15.

151. *Agaveus*, pedo decomposito, multilobato, lobis sub-cuspidatis, hispido-strigoso, mucrone, marginre revoluto, lamell. decurrentibus aequalibus albis. Stipe ta-

leale vel centrale vel communis, On rotten Iron Rock.

152. *Stipa avenacea*.

153. *Morrenia jubaensis*.

154.

155. *Succow.*

156. *Poa*

157. *Oenothera*, Planta perenne, suffruticosa multicaulis, ramosa, ramific. radicio-

lis, Ramis ligulosis integrib. granulatis, pubesc. - fol. patent-
es sessil. altern. linear-canaliculatis, acutis, mucro-dentato-
lobis, subtus pubescentibus - flor. subsessil. axill. Forma Sandy
elevations of the Prairie. Planta glaucescens.

158. *Epiphagus*? Stipe several. breve, rigimes radicea
liber. appress. ovat. nudis, - caulin. patent. lance. mag.
invol. apice recurvatis, peduncul. terminal. inaequalis, ex-
tis, unifloris; - Calyx comp. 5 part., pent. lanceolatum.
flor. patent. - Corolla form. pliat. 5. lobis, stigmata
peltata. Planta parasitica, viscid. pubesc. Sandy elevations
of the Prairie. Weather fine. N.W.

June
16.

10.

Ad Traverse de Sioux.

159. *Lupinus*. - Rad. gramin. tuber; caudex an-
gustatus, caule erecto, pubesce. villosissimo, pubesce-
no-petiol. long. Divergent canalic. hispido; - folios 5-
7 digitatis; foliol. lance. acut, subtriangularis
medii superflue valvatis (concupiscentis) &
nati. foliis; - pedunc. a sicc. diuinato. Forma
hirsuta, foliolos longiorum, foliolis subacutis, lata-
tis, spic. bracteatis, - stipul. basi petiolata rosulata lance.
recurv. ciliatis; - bract., ovat. lance, concolor rora-
tatis, ciliatis, membr. pellucid. - Calyx ves. valvatis
mucronatis, membr. pellucid. hispido 2 part.
4-5 lobitis, (lobis superfic. longissima) lae. lanceol.
acute, 3 nerv. viscid. - Vexill. spathul. subemarginata,
apice apiculata; - alae semi integrifl. obtus., barina
superior integra, - filum connata (libero). Style va-
ginato, apice recurvata, basi bimaculata. Legumen
Prairie. Tipisita weather fine. N.W.

Part Oenothera 157. foliis expletatis subroseo-
tibus, lanceolatis, acutis, caule serrulatis,
fornicatis, non marginalis. latus oblongo. - foliis
vers. latus exserte patentibus, petiolis subcordatis
marginibus erumpit, sternatis succeditis rotundatis
stigm. 4 partito, subpeltato. capitulo primaria
qua draconyliare obclusa. albo sericea. Capitulo co-
lonata 4 part. 4 nervis. Planta ^{grisea} herbacea. floribus
anisodio. At the Indian Red Pipe Stone Quarry July 18th

June 17. At Traverse des Sioux.
In the Prairies around the boulders.

160. *Asclepias*, 161. *Physalis lanceolata*
162. *Spiraea* 163. *Potentilla*
(150, b. *Rosa*) 164. *Lithospermum*
165. ~~Oxybaphus~~ *Oxybaphus laciniatus* Michx.

The bluffs or hills along the St Peter River are remarkable for the variety of plants, which is owing to the variety of soil & the different elevations of the hills. The alluvial bottom along the River abounds with all the rough plants with which they are most everywhere ornamented. besides those:

The hill rises in steps of terraces and consist of (decomposed sand-stone)? - here a different vegetation takes place, the whole plains are filled with *Stipa* *avenacea* & *Stipa americanus*.

June 18. From Traverse des Sioux to traverse des Rivière aux Liards.

we started off at 11 o'clock A. M. The road was very wet & swampy filled with the blossom of Iris & Senecio & with the common yellow umbellifer also Eriophorum &

166. *Asphodelus*.

The dry part of the prairie were covered with *Gaultheria septentrionalis* on the evening we encamped at Lake Milieu which is bordered with some very fine timber of the white oak; and filled with *Eriogonum aquatum*. The flora is still the same with the exception of the above *Asphodelus* & *Eriogonum aquatum* which is more frequently. Weather fine. a little rain in the afternoon, distant thunder in the evening. N.E.

Partie To Traverse des Rivieres aux Liards.

19. Passed the Chuan lake from 10 o'clock to 3rd P.M. 107 *Lirionia aquatica*. Little groups of *Sophor. marg.* in the prairie; prairies without change in the flora. Arrived at the crossing place of St. Peters river at 6 o'clock in the evening, at nine o'clock we were encamped on the opposite side near the village of Sleepy eyes chief of that band of the Teton band of Sioux. Weather extremely beautiful. N.W.

Temperature of the prairie at 4 o'clock in the morning 0°, 5°.

Allionia Wa-chanksi-tchah-tah-peh-zhu-tah. The medicine for the bear.

Rudbeckia purpurea I. Schachs-pe-huk. root that causes to fall, (the root is said) is destructive to the rattlesnakes.

Eryngium aquaticum Rhy-yang-tang.

[26]

June 20. ^{h 30th}

Started as 11 o'clock in the morning from our encampment on the opposite side of the St. Peter River, The valley of the river St. Peters, particularly the opposite side presents itself from the high ridge prairie beautifully, very much like the scenery along the Rhine, in respect of form & vegetation the white oak covers the banks & the heights appear like planted orchards, intermixed by green alleys with grass, on the foot of it the water of the river is visible & the windings of the river for many miles.

Plants in blossom.

Phlox *Amorphia manzanita* *Ovalis* via
tors, *C. stricta*, *Phlox austrotetra*, *Gilia* *septent.*
Anem. am., *Vicia* *Vicia* *Stipa*
eveneana, *Thesium umbellat.*, *Gilia* *tomentosa*
Henckelia americana *Lyg. canescens*, *Physalis laev.*
Sophor. marg. (*Phacelia* *fimbriata*). 37.
Thlaspiatum *Equiset.* 140. *Bartsia hispida*. *Iris* V. 168

166. - *Lixia cordata*, *Pedicular. canad.*
Polygala several. *Senecio* *Lupinus*
159. - Little groups of *Canoth. amer.* in the prairies, the leaves of which the Indians use for a wine on the hill sides groups of *Symphoricarpos* glomerata, - lakes covered with *Senecio* *Lirionia aquatica* & *Eriophorum* camped on the bluff of *Riviere aux Liards*. The bottoms consist chiefly of *Tilia americana*. *Acer sacchar.* & *eni* or *asperr.* found on the banks *Allionia* in bloom collected 107 *Asclepias* River banks. 170. *Potamay*. [27]
171. *Pota maget*. Weather fair SE. cloudy at night.

June
21.

Up the Coteau de Prairie.

Started from our encampment at the Rivière aux Liards at 5 h. 5 m. Passed several lakes in N. E. direction bordered with white-tinted oak timber (white oak). About 9 o'clock we passed about 6 miles off N. an unknown wood, or a Prairie Island with fine timber, the place where all the lower Indians go to hunt musk-rats; crossed a fork of the Rivière aux Liards ~~covered~~ which banks were covered with *Prunus americana*, and chiefly with *Betula populifolia*, & *Bucania bicolor*. found; on the rocky side

- | | |
|------------------------------|----------------------------|
| 172. <i>Astragalus</i> | 173. |
| 174. <i>Equisetum</i> | 175. <i>Betula populif</i> |
| 176. <i>Ranuncul. fluit.</i> | 177. |

on the banks of Rivière aux Liards 178 Delphine.
tridactylow. 179. *Astragalus*, rad. longior, multicapit. fol radi-
cal impar pinn; petiol. elong. granule canalic. erinato, foliol. lance linear.
upper, cont. ~~sub~~ tuberous, glaucous, infer. altern., sup. oppo-
stipul. implexicard. bifid. membran. fiddis lance, ovate, ar-
nitatis, nervosis; peduncul. axill. erect, elongata, subterete,
pellucide-lanceo, piloso; flor. opicatus, semiverticillatis sessilis,
bract. ovate, long-attenu, appressae villosis; calyx ~~acute~~ obtusa,
to albo velutina, sepals evanescens, — *Plantæ glaucescens*,
conica, floribus purpureis. Rocky places in the prairies.
Flora the same as yesterday with the addition of the a-
bove ~~in the~~ and ^{the} ~~the~~ Cypripedium candidum, the proxim-
erecta, Tradescantia virgin. & Hylopsis erecta.
We encamped ~~near one of the tributaries of R. aux Liards.~~
Weather fair, W. S. E. strong.

June
22.

Up the Coteau de Prairie.

No change in the appearance of the vegetation, we travelled tho' a very uniform part to day, and encamped near one of the sources or tributaries of the Arkansas and Laramie. We met at great many rocky situations with a great variety of granite which were examined & specimens collected by Mr. Nicollet, crossed the Riviere aux Roche, and encamped at night on one of the tributaries of the (or one) aux Roche, a little stream completely covered with grass & willows, and at it we collected to day

- 180 out of a grassy lake this
morning.

181.

182.

183.

184. *Epilobium*
Weather fair, very cool at night, S.
W. very strong. clouds.

185. *Amorpha frutescens* ^{River} bank

June
23.

Up to the Confeau de Prairie. The Prairie is undulating, and the variation of the flora is only noticed on the ridges; the lower part, near the common plants, which are generally found in the low bottoms and watered grounds. The ridge bear plants, generally with a whitish green foliage as several *Astragalus*, *Artemisia*, *Amorphia* *canescens*? 189. *Oenothera canadensis*? 190. *Potentilla bipinnatifida*? and several others to pass advanced to find out their generic character. — Arrived and the so called Pelican Lakes (Made-roah-peh-leek in Nat.) we found 192. *Physalis* 193. *Senecio* on the low banks. 186. *Potent. supina*. 187.

188. *Ranunculus sceleratus* and ~~189.~~
191. *Ranunculus Purshii*? both in stagnant water with cypresses interwoven. Weather fair. S. E.

The borders of the lakes are well timbered with white oak from 30 to 40 feet high, and the only high tree, the underwood is *Fraxinus* *Prunus chikasaw* willows, *Symphoricarpos albus*. *Raspberries*, *Vitis riparia*, *Ilex* *nudicaulis*, *Amelanchier* *canadensis*. *Populus grandident.* *Amorphia frutescens* *Monsp. canad.* *Nemone aronit.* *Allium* *nyctagineum*? on the sandy shore with *Potent. supina* & 187. *Rumex crispus* 181, 182, 183, *Mycrothyrs. verticill* in the bottom of the lakes.

[30]

June
24.

At Confeau de Prairie.
Encampment near the Pelican Lakes.

Today) — Weather fair, strong N. West Wind. Cloudy & calm at night. We noted aneroid & took several meteorological observations.

[31]

June
25.

At Coffeau de Prairie,
Encampment near the Pelican lakes.

Floating 196. *Potamogeton crispus*, and
out of the bottom with 199.
On the shores 194. *Silene*. 197. *Allium*
with *Aconitum* (160.); and *Arabis* (113.); low
on little heaps in the bottom. On the ridge I found
198. *Astragalus*, radice sublignosa, caudice multicostata, stems
gato, flavido, caule porrecto, sabiceo; ramulis filiis
que expandit, petiolis & stipulatis divaricatis, racemos.
canalicul., foliis impari pinn. 8-9., foliis suboppositis,
sub-ovat-lance, obtusis, subcorduplicatis, pedunculis axillaris
erecto-patentibus, petiolo, dupl., longioribus, quadrangularis, repun-
do vel exarato rotundoso, tenue; stipulis amplexicaulis,
semi-ovate-acumin.; bract. minutis, filiform, villoso,
floribus remote-spatiatis, recundis, calyx colonato, albo-
velutino; sepalis minutis; corolla peava, vxillo pur-
pureo, albo striato, alis camivagae atropurpureis, le-
gumine pendulo, lanceol. subint. velutino, purpureo-picta.
Plantæ hirsutissimæ, basi caulinam glabra, ^{sub} angust-
tea, multicaulis, nititans. The first appearance.

Weather fair. N.W.

June
26.

At Coffeau de Prairie,
Encampment near the Pelican lakes.

200.

radice subcauda fibroso multi-
erecto, ramoso, tacite, glabro, petiolas, ramulis, semi-
amplexicaulis, fol. patent, strong, opp triangularis,
cordatis, subdecurvantes, racbris, pedunc, erecto,
terris elongato, ovalis, spala potior the ovata, scabia,
involuta, rigida, apic rosea (ra). Radicis 2-3 dentalis
pliatis. Pl. multicaulis, clata. fol. flora lia sub-
alternas. On borders of woods. Illinoian. In
the morning & forenoon, clear in the after-

noon.

June
27.

At Coateau de Prairie to the Head Waters
of River Des Moines.

Started from our encampment at the Pelican Lakes at 10 o'clock. The flora on the prairie is still the same only *Artemesia* is more frequent, also *Benothora canad.* We saw a little flock of large snow white birds with black wings, which our men called cranes, they were grazing on the prairie. 2 o'clock P.M. we crossed one of the head waters or sources of the River Des Moines, about 4-5 yards wide. Joined with two other parts of Pelican lake. we encamped in the evening, at the ruined establishment of Mr. Laframboise in a bottom like valley and an adjoining wood, and lake, this is the last wood we shot with for a whole week. Weather fair. Thunder & rain at night. [34]

June
28.

At Coateau de Prairie to the dividing
Ridge of Mississippi & Missouri.

At 5 o'clock in the morning we proceeded ed. after red foot as good provision of wood. This wood is one of the most fertile and the timber is not inferior to any in the Mississippi bottom. It consists chiefly of *Bucania biolor*, *Tilia amer. Fagii*, *Lamia*, *Fraxinus* etc. *Celtis occident.* *Lor*. *Hedysarum*, *Frax. ex.* The adjoining lake is filled partly with *Latamus*, *Anund*, *Equisetum* & full of birds, & fowls. Much nat. in fl.

201. Heracleum villosum from the Woods. with *Trillium cernuum*, *Aralia nudicaulis*.

As soon as we had passed the wood the Prairies appeared still with shorter grass, about 3 inches long; about 9 o'clock we crossed another branch of the head waters of River Des Moines.

208. *Potentilla* . . . covering the ground under high Canes in low places. At 4 o'clock P.M. we arrived at the Dividing Ridge of the Mississippi - Missouri. Vegetation very poor. Shortly before sunset we encamped in a valley on one of the sources of Sioux River covered with *Nuphar* . . . Weather fair, Thunder and very little rain in the afternoon. Straay S.E.

June
29.

Arrival at the Indian Red Pipe Stone Quarry.

Started from our encampment at 6 o'clock arrived at 8¹/₂ 30^m at the main source of Sioux River, in a winding valley, surrounded by high barren & gravelly, with a little vegetation; (3000 feet above the level of the sea) such as *Thesium umbell. Astragal. Euchroma grand?* *Senevia Balsamita.*

202. *Linum* 3-5 inches. with large flowers. & 203. *Gaura biennis?* but 3-6 inches high. *Oenoth. canad.* 2-3". *Lupinus sibir.* 3-4". Germ. with ripe seed. *Anemone?* Arrived at the Battle ground of the ancient Yanktons & Tetons, where the breastworks are still visible and at 2 h 15^m at the celebrated Indian Red Pipe stone quarry, under a heavy thunder shower & strong N.W. Weather clear towards evening. 204. *Pentastem. grandiflorum?* at the top & foot of the quarry. Rad. incress. annua. Caulis erectus (integro?) tenuis, glabro. fol. radical. petiolatis spatulatis, ovalis. lanceol. acutis decurrentibus. Fol. caulinis connata, opposita, pectinat. cordato-ovata. lanceol. (oblonga). fol. floral hemisphaericis acutis divergentibus. Flor. laxiss. & lerm. pedunculi brevi. incrassati post aestivatione erecto, rigido. Sepala calyculis, exserte lanceolato, exato. Planta gynnosperm aigida, robusta, speciosa, grandiflora. fl. lilacina.

[36]

The Quarry.

According to the information of Mr Nicolleth.

[37]

June
30.

At the Indian Red Pipe Stone Quarry.

264. *Pentstemon grandiflorum*? radice ramosa, ^{amara}, caudice
increnata; caule erecto integrum tenui & glabro; foliis radicibus
decurrente-petiolaris, spatulatis, ovato-lanceolatis. diverso.
tibus; folia caulinis connata, opposita, petiolatae. cordata. ovata.
lanceolatae; fol. floral. divergentes. hemisphaericae, acuta, bracteas,
floribus axillaris & terminalibus. pedunculo brevi, post easter-
nationem incrassato, erecto, unifloro; Sepala calyculis, ovata
lata. acuta. Planta rigida glandula gynoecio; floribus
conspicuis liliaciniis 4. In the Rocks, in the creek and on
the humus heaped up by rain with *Talinum tenellum*. *Sibutia*,
Liparophytida &c.

265. *Pentstemon pumilum*? caule erecto glabro, foliis
radicibus ^{sessilibus} (ovalo)-lanceolatis, integerrimis; caulinis, semiem-
arginatis, patentibus, oppositis, lanceolatis, exuminatis remoto-
scandentes, etsibus axillaris & terminalibus, maximis spiratis, (pri-
mis). pedunculis erect 1-2 fasciatis bracteatis vel stipulatis petiis
floribus.) sepala calyculis semi-ovata lanceolata acuta. (Sepala
superior ovata, exuminata reflexa.) corolla pubescens. lobis
subaequalibus. Stigma ^{longato} apice rotunda, superficie longitudi-
nali auro-barbata. with the former on the Rocks
~~and~~ ^{and} 266. Aster

267. *Talinum tenellifolium*, on the tops of the rocks,
in the humus, with 268. Plantago.

269. *Crataegus crus galli*. 270. *Gonych. atropurpurea*.

271. *Acalypha virginiana*

Weather fair.

of July
1.

At the Indian Red Pipe stone Quarry.

272. *Allionia* rad. carnosa, nigra, dulcis; caudice
1-4 partito, ex parte crebro (ramosa), tenui, rigido, villoso, foliis
subsessilibus, patente divergentibus ovalis, acutis, undulatis,
subargatis, subconvolutis, raro. cultis suberosis, floribus axilla-
ribus & terminalibus, subracemosis, pedunculo subrotolo, post easter-
nationem divaricato.

Planta rigida, alba-villosa, lata, foliis subtus pallidioribus
floribus roseis, filam. violaceis, corolla rotata 10. lobis.

273. *Spiraea*. ^{salicifolia}, caule frutescente lignoso, virgato, ramo
pallido-falvo, nitido, ramis patent. divergent. floriferis, nitidis. foliis
subsessilibus, patent. divergentibus, lanceol. (oblong). ^{acute} serratis, subtus
pallidioribus, lobibus terminalibus, opacus-paniculatis, albis
(fol. floralia minuta) pedunc. partial. subpubes. bracteatis, sepal
calyculis, 3angul., floribus, 5gynis, albis. On the Rocky plains
from 2-3' feet high.

274. *Cerastrum*

Covering the crags of the
Rocks but already gone, intermixed with *Cerastrum*
patens.

275. *Lychnis alatum*? caule erecto virgato 4 angu-
lato, stato, foliis sessilibus, oppositis, subalternis, subalternis,
lanceolatis, basi cordatis, undulatis, floribus axillari-
bus, subsessilibus, hexandris, petalis spatulatis, liliaci-
nis. Planta subrotaria, gracilis, folia floral. bractea
formis. Radice subserpentaria. Around the little lakes often
between the Rocks, not abundant here.

276. *Paspalum*

with the former but more abundant
277. *Euphorbia helioscopia*. scattered over the dry rocks
which were inundated in the Spring. very small & not abundant.

- 278.

- 279.

Borders of the creek below the falls.
with the former, both not abundant.

July

At the Indian Red Pipe-stone Quarry.

220. Geum album, On the border of the creek with the former, not abundant

221. *Polygonum* climbing over the Strawberry under the shade of the Rocks, (This plant and the Euonymus atropurp. & tiliaceum riparia prove that this place formerly was covered with high timber, as the trees were found but as undershoots, & with several others.)

222. *Gentian*
(Both along the rocky
Ponds among Carex, Sparganiun,

223. *Trichophyllum*, the pond itself decorated with Ranunculus fluitans, Nuphar advena, Myriophyllum verticillatum, Scirpus in several species, Veronica bequaertii.

224. *Scirpus* with the former.

225. *On dry rocks*
amidst, *Penstemon grandiflorum*, *Cactus* &c.,

226. *Amorpha canescens*, the striking character & color of the N. Western prairies from *Galena* ~~up to~~ up to this place, ^{& farther} the first blossoms which appear I have found it also in the prairies in the upper Missouri but not so abundant.

Polygonum 105. Traverse des Sioux, this plant is in great perfection in shades under the Rocks.

Radix verticillata, ramos subligulae, carnosae fibrose, extrema fuscata nigra, amara, caerulea incrassata, 1-3 partita; caule erecto, ramos, tenete, rami petenti, divergentibus, rami axillaris floriferis; foliis subsessilibus, oppositis, diversicatis, subpendulis, ovali- bus, acutis, subtus pubescentibus, pallidioreibus;

July

At the Indian Red Pipe-stone Quarry.

3.

floribus axillaris & term. corymbosis; pedunc. generali divergenti, ramatiatis, post rami & rami basi stipitatis. Stigmas lanceol. acuminat. ailiatis, calyx minutu, 5 dentato, corolla campanulata 5-lobe, lobis dentis reflexis; Stamnibus sagittatis, coniforme - cohæsenteritis, Stigma ovali (stipitato?) includ; germine 2 partiti, folliculis subglobosis circumdati, filamentis alternantibus. Pl. glabra, foliis levius, floribus roseis, albo striatis, 1-2 $\frac{1}{2}$ foot high. *Cynanchum laeve*? *Micromia*. The follicles follow the alternating the filaments, which are closely united or appressed & include the stigma, in a conic shape, stigma on both parts of the ovary?

July
4.

At the Indian Red Rock Stone Quarry

Flora

a, On the top, or surface of the Rocks, exposed
to the Sun - ^{as spring flowers, now with near ripe seeds.}

Draba caroliniana, *Ceratium nutans*, *Androsace septentrionalis*, *Pluchea americana*, *Ceratium dichotomum?*, *Aquilegia canadensis*, *Icews nivale*, *Gnaphalium plantagineum*, *Veronica peregrina*, *Tratis stricta*, *Anemone Thesium umbellatum*, *Acalypha virginica*.

The lower rocks are partly covered with *Lycopodium apodum?* most destroyed by the heat of the sun, with *Bryonia vulgaris* & a smaller variety, perhaps both distinct species. b, Summer flowers, now in bloom.

In the cracks of the upper & lower rocks, &
in the accumulated vegetable substance deposited
by inundation & rain.

Fatoum tenetifolium, *Delphinium 3 dactylon*,
Potentilla arguta, *Pot. bipinnatifida*, *Oenothera canadensis?*, *Plantago virginica*, ~~Thlaspi~~ *Pentstemon grandiflorus*, *Pentstemon procumbens?*, *Atemesia frigida* (root in bloom).

Lower down & on the Prairie.

Thalictrum dioicum. *Aster amplexicaulis*, ^{*}*sericeus*,
Aster 195 *obtusilobus* . *Oalis violacea*, *197* *Allium*
Anemone virginiana, *37*. *Amb.* . *Spiraea*
Allionia hispida *Polygonum* *stricta*, *Amorpha canescens*,
A. frutescens, *Vicia americana*, *V. cracca*, *Tradescantia virginica*? *Petalostemon violaceum*, *Oenothera canadensis*, *Acetosella*, *Lychnis salicaria*, *166*. *Asphodelus*, *Polygonum amphibium*, *Euphorbia helioscopia*, *Arabis stricta*, *Silene stellata?* *S.* *218* *Graven* . *219*.

Nuphar advena, *Myriophyllum verticillata*, *Plant.*
Ranunculus fluitans, *Acalypha virginica*, *Lilium*
uniflorum.

July
4.

On the top, and amidst the Rocks
Trees and Shrubs with fruit. *Fagus sylvatica*,
Quercus bicolor, *Fraxinus americana*,
Crataegus crus galli, *Erythronium atropurpureum*,
Annona ovalis, *Cerasus hyemalis*,
Cerasus depressa (on the top in the cracks) *Corylus americana*, *Ribes Cynosbati* & *Floridana*,
Vitis riparia, *Menispermum canadense*,
Sonila herbacea, *Rhus toxicodendron*,
Amorphia frutescens *Ampelopsis* 5 folia.

Spinacia salicifolia now in bloom *Sympetrum*
tria rufescens. In consequence of the scarcity of wood
in this place the timber here is very
scarce & is daily decreasing, depriving this
beautiful scenery of the grandeur, which
belongest to it to some extent.

The ponds below the falls of the creek and
bordered by *Salix petiolaris*, the more they are
forward the Prairie the more they are naked, and only
surrounded by high grasses.

Remarks

July
5.

At the Indian Red Pipe Stone Quarry.

227. *Polygonum amphibium*. — *Poa aquatica* var.
americana Torr. along the creek, collected 3 days ago.

Post 160. *Riviere aux Liards*. Rad. (sublignoso) caeso,
caule 1-3 partito, — caule stricto, ramoso, sub-
terete, obtuse & angulato; folios sessilibus, diver-
gentibus, oblongis, acutis, basi cordatis, crenulari-
vibus; nerv. albus pellucidis, subtus pallidior
tibus; — floribus terminalibus, (corymbosis); umbella-
tis,? — Pedunc. part. stipulatis; 1/4-1/2 ft. 3 par-
tito; — stipulis lineare-lanceol. acuminatis,
appendiculatis membranaceis; — Sepala
5-lobis, — lance-linear-acuminatae, membra-
noeens, corollae subaequalia; — Corolla
minuta alba-viride, monopetala, lobis se-
missimilatis.* Shrub, particularly in the high
grasses of the Coulees & River Bottoms &
margins of Lakes & Ponds. Very Abundant.

228. *Umbelliferous*.

Cnidium maculata Linn.

Rad. subbulbosus, granulosus, fibrosa, canosa,
caule erecto, subflexuoso, ramoso, articulato,
subro. lineato, glabro, nitido, fistuloso; — fol. rau.
longe-petiolatis, 3-angulatis, 2-3 pinnatis, apice
replicatis; — petiola rwm. subrete, solido, pulverulento,
petiol. concretales; — folios sessilibus, lanceol.
serrato & mucronulato-serrato, subcordato-patentis,
folia Caulina amplexicaudata, patentia; — flor.
lineari-lanceolata, ternata; — ramis patentibus.

[44]

divergentibus, subsolidis; — Involucro generali
monophyllo, lineato; — partiale 3-10 phylla
late rata, lineare-acute; — petali subcordatis,
marginibus, inflexis, apice subcordatis; — sepalis
calycois, minutis, 3-angular. albis; petalis alterna-
tibus, — filamentis tuberosis, petalis aqua-
libus, (& petaligr. caly. sep. altern.) The fila-
ments, are with the segments of the calyx
alternating the petals, green flat, the short
style upon it, in the centre subbifid, the
surface of the green shining & uneven.
Rocky wet Meadow, in the high grasses
with the former, abundant.

229. *Spiraea*, gravelly inundates soil
& banks on inundated Rock now dry.

Post 206. Aster

Rad. fib. connoro,
bienn. caule erecto flexuoso, folioso, subhis-
tico, sublate-lineato; — fol. rad. petiolatis, sub-
oppositi, acutis, remote-dentatis, hispatis, 3-
nervibus, caulinis erete-patentibus, sessilibus;
decurrent, lanceolat. acutis, laevibus, 3-nervi-
bus; floribus Corymbosis, axillaris patens. Di-
vergentibus, axillaribus floriferis,) folia flo-
ralia minuta, fimbriata; — pedunculus-divari-
catis, unifloris; — Perianthio imbricato; — sep-
alis lineibus, acutis, pilosis, pellucidis, appressi.
— Radis duplicitis linearibus, caulinatis,
disco lato. — Plantae inconspicuae, pubescens
tristis, pallidivirens. Borders of Woods &
River banks, Common & abundant.

[45]

July
6.

From the Indian Red Pipe Stone Quarry
up to the Coteau de Prairie Perse —

Left our encampment & the Pipe Quarry
at 4^h 30^m & went on North. The morning
was very foggy, so that we often were compelled
to stop. The vegetation is very poor on
the ridges; the grass is thin & short 23¹/₂ *Lilium*
Catesbeii with its bright vermilion colors
appears high & low, with *Rosa pinnifolia*
but no other species of Rose appeared.
A small rigid 23¹/₂ *Aster* in bloom, probably
deformed by the burnings, with a white flower
petals & disk. with 23²/₃ *Acerates* &
23⁴/₅ *Anemone virginiana*, — 23⁷/₈ *Lobelia*
fol ovato-peltatis, fimbriatis, subdentica-
tatis; caulinibus sessilibus, caule puberente,
suberecte, a small erect species with purple flower
& white inside 6-8" low & high Prairie.

239. *Fuernissia canadense*.

Root repert. articulata, joints fibrose,
stem erect, integer, articulata. Hand, sub-
repand, hirsute, pilis reptioris, folis subaequali-
bus, patent. diverg., lanceolate adnominator,
base truncata; serrate, hirsute, nerves white &
yellowish, spike verticillate bracteate; - bracts
ovale-subdentata, cuspidata (acumin.) villosa
fimbriata, - Calyx 5 dentata, acute, corolla
bilabiata, inferior lobes lobed, whereof the mid-
one is crenulate, the upper part is formi-
cate & integra, Dicidus hornei *Gymnorhiza*

[46]

Among the high grasses, flowers purple
& white variegated, in whorled spikes.
very abundant in the coulees. —

238.

Radice tuberosa pul-
mato, succulento, caudato; - caudice gemipaxi
caule erecto, folioso, irregulari-angulato,
subtonto; - folis vaginatis tibus, - Folia na-
divalia patentia, breviores, ovalia; ^{vel} quamosa
linea subcrenata, lanceol. elongat. petioli
superiora, angustata appressa, (cavili & rad-
icibus, cristalliana,) floribus spicatis
dense bracteatis, germine sessile, tortu, in-
sequali-angulato; - Sepala perianthii
subaequalia, superior ovatum incurvum;
lateralia obliqua; - Petala 3, superior coni-
ventia, lanceolata, obliqua; lipa integrata, lanceolata
aseta incurva, caligata, cal. clavato subaplu-
to, labia breviora; - Columna 3-bobata, 2 auriculata
antherifera, evata, (Pollinia lateralia stipitate
glandulosa stellata aggregatae) — The whole flower
very indistinct & ~~sharp~~. Coulees at Coteau
des Prairies Perse near Woods — 20" high.

Post Astragal. 179. ^{legumine} Legume sessile erect, sides
subinflated, acute, (style persistent exsert), also
succulento-villoso, coriaceo, rubescens
Buffaloe seen by our Indians. Lake with fine timber. The most
substantial trees, *Tilia americana* & *Fraxinus americana* Quercus bi-
color, — the Lake 1 mile off is 13 miles long & 1¹/₂ wide; the
coulees contain fine soil & clear water, that of the
lake is greenish. — The Spanish fly is here so abundant
on the above Astragales that the air is fetid on the slopes of
the Ravines. N. Wind fair weather.

[47]

July 7. From Coteau de Prairie Perce, to the Riviere Croche.

Left our encampment at Lake Perce, at 5^h 15^m N by West. Cloudy dull morning. *Cypripedium candidum* on the slopes of the ridges, in fruit. On the elevations with *Antennaria*, 240. *Pentstemon*, - caudex radicans, caespitose, with many stems; stem erect, low, leafy, radical leaves with long petioles, decurrent, lanceolate, acuminate, obtuse; caudine ones sessile, patent, opposite, suprad, acute, sessilia; pedunculus axill. erectis, rigidis bifloro - partitae ones stipitate, unequal (flowers paniculate) pale-purple, the sepals of the calyx equal, lanceolate, acute, mucronulate, rigid, - capsule ovoid bivalved, mucronate, glaber, (the leaves are coriaceous, entire & sharp dentate, remote & acute serrate, subundulate & crisp, variable supra cum cante & pedunculo pubescens obovatae, - A plant very differing in its foliage and only found on dry ridges, very rigid & scarcely 10 inches high. -

Pect. Lupinus 159. Leguminosae monosperma nosstrato-acuminato, albo-villosa, 3 Sem. complaniforme.

241. Leguminosae, Radice elongata, tenace, albo, cordata 1-3 partita, carpe erecta, pubescens, terete, subcavata, subscabente & albo-verruculosa, luteo, pilosa; foliis

irregular-pinnatis, petiolatae commune, canaliculatae - partialibus trichibus; = foliata (5-8 pax) lanceol, acut, punctate verruculosa.) - Stipe his, linearibus acutis, minutis, dichotomis, floribus, axill. sonico-spiratis, bracteatis, pedunculis basibus, erect-patent, (exarata petiols breviora; - bracteis ovatis acuminat-membranaceis; - Calyx inaequatus (basi gibbo), inflatus, 5 fidus, glandulos & glutinoso pilos, sepalis linearibus; Vexill. elongat. oval-lanceolate, patent. peltato-lineata; alis minutis, semi-patellatis, angustatis, carina minuta, viride alba elongata leguminine verrucosa. Stylo - Radical leaves are also stipitate 2, semiamplexicaule. 3 ang. ovate acute. This plant appeared first on the orocked river in the high grass & then often of high ground situations & margins of Ponds & Lakes. abundant 1-2¹/₂ f. high. Weather fair.

July
8.

From Riviere Croche to ~~Croche~~ ^{2 Lodge} Lakes.

Left our C. at 8^h 45^m in N. direction.
the crooked river for a long time on our left.
with some Willow & Oak on the margins.
the bottom of it contains very high grass, inter-
mixed with Thalictrum & the Legum. 241. The
silvery Lupine is still increasing uniting with other
plants, additional to the former of that color.
We crossed the crooked river at 10 o'clock A. M.
the current is swift, the water white & clear, bed rocky
& gravelly we found a species of Unio with the same
species of Leeches as in Lac Pelican, the river
is about 12-16 yards wide & full of Conifers &
Potomazon, the lowest stand of Water about 18-
24 ft. a branch of Rock River?) On a sandy elevation
close by the river, covered with Githenia, Arte-
misia I found a Buphtalmum?

242. Rad. caudata perpendicular. caudice
multipartito, caule prostrato, expendo, suberecto (as-
cending) ramose, terete, folioso, hispidissimo, subescens
foliis integris, villoris, levibus, undulatis, tortilis, al-
ternis, - infioribus, lanceol. basi angust. subpetiol.
decurrentibus, obtusis, superiora semiamplexicaul. ob-
long-lanceol. nervosis, - Petiolis. intravat., squamis erectis
linearis, appressis, sericeis; foliis floralibus circumdati.
Pappus setosus articulatus.

Camped between the Lake of the two
Bank Ledges. Sultry & warm weather.
J. E.

July
9.

From the Lakes of the two Bank Ledges
to the Cactus Lakes,

243. Lupinus Radice crassa divergen-
te ramoso, caudice nodoso, caule erecto
ramoso, flexuoso; - foliis petiolatis, Divaganti-
bus; - Caulinia digitata; superna & fol. na mu-
lorum tenuate; - foliola subsess. elliptica-lanceola-
ta, obtusa?) peduncul. axillar. patente-inflexuosa
caulata, - petiolis communis canaliculata, &
stipulatis; - St. pubis lanceolatis (aruminatis,).
margin. incurv. obtusis, floribus spiratis - spicis pauci-
flor. - aruminatis 3 floris, sessilibus, bracteatis; calyx
bilabiatus; lobis supra maxima brevissima formicata, supe-
ra linearis acuta elongata, corollam sequente; man-
ginibus involutis. - Vesiculum condatum, marg. re-
volutis; - alis semisagittatis, obtuse-ditata, carina ai-
nuta. - Planta erigeta, floribus minuti aruncis.
This plant appears on the Huffs along the St Peters,
near Inverne des Sioux, and is very abundant on
the Coteau de Prairie, that it characterizes the
country, by its beautiful silvery color, it is more
generally on level ground, but sometimes noticed
in every situation.

Started at 8^h 30^m (after we witnessed several heavy thunder showers
around us, without having much of the rain, by S. E. wind.) Took
our road N. E., at about 10 o'clock we reached a Lake
surrounded by some scrubby Black Rose Cherry, Willows,
Fraxinus & Quercus bicolor? or. The rocky & gravelly inundated
shore I found in the high grass & other plants the
Dentingtonia, but not in blossom with the Sagittaria

245. Caule exato ramoso, terete, gracile, foliis leucopetiolato-
to, tenuis, divaricatis, petiolis commune ditata, foliolis sub-
sessili.

July
10.

At the Cactus Lake, or Lac des
Amarouettes.

ellipticas-lanceolatis, sericeis, integerrimis, floribus
terminatis solitariis minutis, (folia florulae cap-
singulare pet. sess.) floribus patentibus, calyx 5-fidus
fissis linearis-lanceolatis acutis, fimbriatis, Vall. no-
tundato, (cordato) conduplicato, albo, canes venoso-
alio linearibus, obtusis obvio, Corolla clausa, acuta, a-
spice lutea; — Legumen perpend. rectinato, elongato, li-
neane-tetragono; — Planta annua, pusilla, glauca villosa,
bottentior, sepala calycula longiora —

246. *Peltianthus* *cule erecto* (Saffron-
 licoso) ramoso, multiparito, tenet, lineato, scaber-
 rimos; — ramis radicibus ~~dis~~ patentibus, Superneq. di-
 patentibus; — folias caulinibus longipetiolatis,
 laxis; — angustato-cordatis, auminatis, erose-serratis,
 3-nervibus, undulatis, scaberrimis; — floribus ter-
 minatis subsolitariis; — glauco anthodio, tan-
 cato, acutis, ciliatis, tristis; — Receptaculo villoso,
 — Radiis ellipticis, plumbatis, conspicuis; — Discus concavo-
 lobatoe purpureo; — Planta rara, solitaria, annua.
Pyramidalis *glauca*, ricens, floribus conspicuis. —
 This plant appeared only along the Sandy Beach of
 this lake, very few in number scattered among *Arenaria*,
biennis & *Baphshalmum* & *Artemisia*. *Cleome*
 it is evidently an annual plant. —

Encamped at the Cactus Lake, after we travelled about
 15 miles, passed a fine timbered wood on the left, separating 2
 lakes, of about 20 miles circumference. This lake is about
 40 miles circumference, contains apparently 3 species
 of *Conchylia*, & the Sandy Beach is covered with
Cleome 5 pndra. — Weather sultry, S. E. Thun-
 der & rain at night.

[52]

July
10.

At the Cactus Lake, or Lac des
Amarouettes.

Post July 6th In the valley 247 *Equisetum*,
 Post July 8th *Lithospermum* ²⁴⁸ *Catesbeii*; — Post July 8th.
 249. *Physalis* with *Syngenesia* 249 along the
 banks of Riviere Onoche. — 249 *Lysimachia*
ciliaris, in rotated places & among high grasses.
 Post 8 of July 250. *Trifolium* Buffalo Clover-
 tow places in prairies generally *Patty Leeks*, —
 this species of *Trifol* covers the the soil closely
 by its stolones. — 251 (10 of July) *Cleome doddean-*
dra var. Canadensis, — vel *Polygonia gravesensis**
 Rafin. — This plant is called by the Sioux
 and used as a medicine to find as many
 Buffalo as they want, which is performed by
 mixing this plant with another, pounding both
 together & with this mixture the performer goes
 ad horseback near the buffalo, by which attracted
 by the agreeable scent, follow him in the enclo-
 sure, (put up for the purpose.) through a narrow
 door entrance, wherein they meet their death.
 This medicine is not very publick among the Indians
 only few know the ingredients and performance
 so that it is said, an Indian will give for the first
 article 5 horses & for the second his Lodge; we have
 not been able to learn the second species. 252.
Polygonum? found on rotated spots in the high
 grasses, in low place, near this lake. — 253. *Sonches*
 from the shore of the Lake of 2 Ledges July 8th abund-
 ant. 254. *Astragalus* from the sandy gravelly
 shore of Lake Cactus, ~~adversus~~ yellowish flower
 July 9th. — 255 *Darlingtonia* brachycarpa scattered
 through the Woods with *Logani*. 245 which appeared
 also on this lake, only among the boulders in the
 valley [53]

July
10.

At the Cactus Lake, on Lac des
Amourettes.

Soil with Sonchus (253) - 254. Verbena from
the sloping banks near the shore of the Lakes &
& two bark ledges, with 255 Stachysapheta from
the same places. 258. Cyperaceae prostrate
flat on the bottom of dry lakes of some parts
of the above Lake. - 259. Triticum from the
high dry banks of the shore of Cactus & Lodge
Lakes. 259. Triticum from the high dry shore
of 2 bark ledges Lakes. - 260. Acorates leaves
fan-shaped, curved-reticulate, obtuse, from the
high shore of the Lakes & hill slopes along the
Ravines. - 260. Cyperaceae? the bottom
of the dry Lakes are covered with it with
(258) 262. Scirpus. (263. Typha) Lakes
of the two bark ledges - July 8th with Scirpus. But
of Polygonum amphibium. Potentilla Supina.
Senecio biennis - The little timber around
the lakes chiefly Ulmus americana, & Frax-
inus acuminata - Quercus discolor. - Populus
grandidentata, & Amorpha frutescens, the trees
about 25 feet high depressed; - Vitis riparia among
it. - 264. Symphoricarpos racemosus. -

July
11.

From Cactus Lake to the
Village of Kinikampi at the two
Woods.

High wind N.W. in the morning, clear, 48°
at 15 o'clock.

Post Lupinus (243. Spica subverticillata, - rameu-
lis suboppositis, 3 flor. bracteatis; - bracteis ovat-acu-
minatis; - calyx 2 part. part. super. 3 fidig brevior.
inferior, integro, elongatus, obtriangularis, corollam
longiore, apice conduplicato) - Verilla cordata, also
striato-nodatis, - abax petioli parallelae occurvae,
carina clausa, minuta verilla coarctata, floribus
atropurpureis, minutis. Boralea

265. between the accumu-
lated granite boulders, shore of Lake Cactus
266. Carex with the former. - Rosa folia
obovatis, ellipt. floro abso. glaucescens, the leaves
somewhat cuneate, and serrate, pubescens un-
derneath, spinis articulatis, ericite patent.
anilate, calyx glauco-pilosus, hooked, odorife-
cious, near the shore of Cactus Lake with a great
flock of Centstemon grandiflorum. This Rose
as we see it as it appears is probably only a
variety of Rosa parviflora Ehrh. -

268. Euphorbia prostrate & a little ascending
when in the grass, this one on the gravelly
shore with Legumin (245.) which is very ab-
undant, and still in bloom, and also with
269. a Tetradynamus plant, & with

270. Astragalus
scandens, radice (jusi-
forone) ovalato, condice multipunctato, prostrata,
a low stemless species, glauca, & as the flowers
were gone, some remains of them had a pale
yellow color; the legumes an inflated - not very
numerous

July
11.

From the Cactus Lake to the Village
of Kinikampi at the two Woods.

with the former & *Pent. grand.* & *Aster. Tyri-*
aca. Here the Flora has a different ap-
pearance. *Rosa panriflora* & 267 is about
1' high, covering large high & dry places,
where the glaucous green ^{near to the water} ~~greenish~~; *Cleome*
dresses the shore with a purplish green &
the slopes of the shore, is covered with *Baph-*
thalium (242), and principally with the former
preceding one the silvery *Artemisia* intermixed
with a green species; *Amorpha-Lupinus*
& *Ligodesmia*, with a species of *Diplopappus*, the
above Roses, *Gleianthus*, *Rudbeckia pinnata* & are
are the remotest of the Water; in some places,
between fallen timber & large boulders is *Potan-*
tilla sapina & *Tetrad. 246*. The prevalent plants.
The timber is chiefly American Elm & Cotton
wood (*Pop. grandis*) but the most part is dead, destroyed
by the fire.

Started from our encampment at
Cactus Lake at 2 o'clock, P.M. and arrived N.E.
at the confluence of river, at Rivière
Croche; encamped on the opposite side.
The river is bordered with some Willow &
high grasses, *Juncus*, 271. *Salix*
on the bank 272. 273 *Pespedezas*
with the former. Weather fair, a little cloudy
in the evening, 9 o'clock the Thermom. 47°

July
12.

From the Confluence of River
& Rivière Croche, to the Village of
Kinikampi at the two Woods.

Started off at 5h 45m in N.W. direction, the
night was extremely fresh, but 39° at sunrise.
The prostrate, capitate *Astragalus* very abundant.
intermixed with the large *Thermone* & *Pentstemon*
gracile? - the last in great abundance & per-
fection with panicles of 8-10" long, plant high
high, also *Oenoth. canad.* & *Petalost. candidum*
Lupinus all in full blossom, the last still in
great abundance, *Achillea millefolium* on rotated
spots, *Amorpha* very abundant, but not in
bloom yet, *Gaura rivale* in ripe seed; *Potent. ar-*
guta in bloom; & *Astragalus* (167) still in bloom - *blea-*
thaea americana in ripe seed; - all in high situations,
Lilium Catesbeii; *Lithosperm.* & *Leg.* (245) in bloom
& great abundance with *Hecophyllum asphodeloides?* in
in Salt Seeks. - From the bluffs of crooked over
on high ridges & barren gravelly soil, intermixed
with limestone parts, 274. *Galardia* sp. Radice
gracile, terete, caudice collato, 1-4 partito, caule erecto,
diviso; terete, suboblineato, hispido & tomentoso,
foliis ~~et~~ diversis, radicibus longe petiolatis, decolora-
rentibus, lanceolatis obtusis; foliis vel tomentoso-villosis
carnosis, 3-nervis, integrernis, caulinibus ~~serrulatis~~ lan-
colatis et pinnatifidis, semiamplexicaulis (pinnales
lanceolatis) basi villoso; - floribus solitariis termina-
tibus, pedunculatis 1 ped. uniforme; - Perianth 3pli-
cato, stellato, imbricato, squamae exteriora lani colata
divaricata, apice incurva, - inferiora appressa, tenui-
ans acuminata villoso-fimbriata, basi floccosa
tomentosa, Radiis 15° divergente-divaricatis, trifidis
subcuneiformibus, subplicatis, auricis, ramiculatis stri-
atis, regularibus, disco hemisphaericis, fructu sericeo,

July
12.

From the Confluence of River
& Riviere Croche to the Village of
Kinihampi at the two Woods.

erectus petiolaris, Det. 345. rigidis. Plantae ste-
gans, 10-15" high. Silvery-tomentaceo-villosa;
floribus, bracteo-ranunculaceis, disco amaran-
thino, floribus conspicuis.

Pentstemon (240.) Calyx $\frac{1}{3}$ of the length
of the corolla, corolla tubulosa, ventricosa -
vix purple spotted, 2 parted part. 5 lobed, upper
part 2 lobed, patent-reflexed, infer. 3 lobed straight
reclinate, flat, pubescent, in & outside. - With
the former and on all high dry banks & ridges,
up to the Goutouau & particularly near the dividing
ridges, 8-10" high. cespitosus - 275. Potentilla
radice tunicata nigra, caudice ramosa, ca-
be suberecta, gracile; foliis radicib. palmato-pinnati-
foliatis 6 pinnis, inferior appendiculatis, subconduplica-
tis, incise-serratis, argenteo-sericeis, tomentosis,
villoris; petiolis brevibus crassis, rigidis, ~~caule~~
~~rotundis~~, folia caulinis (few) stipulata, stipulis
dolabifirmis, apice recurvis, floribus ramisti-
bus 3 fidis, minutis, (appearant so with
the stipules) petalis obcordatis, floribus axillaris &
& terminalibus, rameo-corymbosis. Calyx infe-
rior sessilis, aequante. - Another beautiful silvery
plant, with fine small golden yellow flowers
with the bipinnatifida & the former Pentstemon 240.
Silvery Artemisia, and all plants mentioned on
this date above.

Lilium Catesbaei very abundant on the slopes of
the hills, near the Lakes with Xerophyllum & Leonto-

[58] don.

July
13.

From the Confluence of River
& Riviere Croche to the Village of
Kinihampi at the two Woods.

with some scattered *Syringonium* ances in
blossom.

Polygonum? 159. Tubero napiforme, ovato, tunica
lo conficata, tunica externa membranacea
negrandine; interna aurantiaca, subtes albu-
lignosa & tenax, caro albo medullosa, cen-
tra lignoso-fibroso; Caudice nodosa, collata,
cauda ramosa & fibrosa. Caulis foliis &
pedunculisque affinis, pyramidatus, rime-
no-villosus, base angustior 1-4 parti bus.
This is one of the most remarkable plants
of this region. it is the *Psoralea esculenta* of
Bush, and the plant where the Indians subsist
on during the summer season, dried they trade with
it as ~~Hoffartides~~.

Arrived at the Village of
the two Woods at 4 o'clock P.M. - The Indians re-
ceived us with an unexpected cordiality, they
met us 3 miles before their village, in a warlike
array, forming a regular procession on horse-
back; when we arrived at their village, they invited
us to a feast, prepared for us, where we of
course could not hesitate, it consisted of
Dag meat & Bread root from the prairies.
Weather as usually very favourable N.W.

[59]

July
13.

At the Village of Hinikampiit
the two Woods.

This lakes are surrounded by some timber of Lind, Elm, Acer Segundo, the usual oak, Ash & chiefly *Populus grandidentata*, but this timber is only that remained & escaped from the burnings of the Prairies by the Indians. - The shores & the lakes itself are full of *Tamias*, *Vireos* - *Tippera* & *Triphorus* in *Licenaria*, the shore is very sandy with a great portion of limestone parts. - one of the lakes is very salty; - on the lower margin of the lake, in the wet gravel; - 276. *Rubbeckia Radice fasciculata*. brevi, caudice 1-8 partito; caule erecto, ramoso, fleuoro, subterete, rubro-maculato, verruculoso, pilosus pilosis, pili glandulosis? articulatis, folia radicata longipetiolata, glauca, lateris decurrentibus, subaequalibus, ovatis, ellipticis, obtusis triangularibus, exose serratio, hirsutis; - Caulis sessilia patentia, basi dilatata, subauriculata vel cordata, undulata, 3 revoluta, erose-dentata ciliata, hirsuta, marginibus pubescentibus. - floribus terminalibus (ramisim) perianth basi rotundatum (receptaculo) exteriore replicator-dissecto-lanuginosus, 3 nervibus, ligulis aequaliter, integraneol. acum. ciliatae, superficie glabro, cum pro-ced setose ciliatae, pedunculo exanato, Radix et pedunculus pendulus, bidentatus, plicatus; divaricatus-pendulus, bidentatus, plicatus; lanceolatus, 14-25. *Disco conico*, scutis lanceolatis amaranthiniis) Radix externe pallidior & pubescentibus internis intense-aurantiacis

[50]

July
13

At the Village of Hinikampiit
the two Woods.

rigida, hirsuta, subra, crassivenia, floribus conspicuis aurantiacis; - 277. The abundant openous Gramen in the concavities of the Prairies; this one from the borders of the Lake at the two Woods. 278. *Geum* fol. nad. interrupte - pinnatifidis, pinnae supraea majora, pinnulae subalterne-interruptae, dentatae petiolo canaliculato striato, stipulato, caule suberecto, hexaoco, terete, hirsuto, foliis stipulatis, subpinnatifidis, subternis, dentatis, lobis acuminatis, stipulis rhomboidalis, palmatis, floribus axillari-terminalibus, pedunculis pubescens, partiales in exsertis. Sepala calyptis, infer oval acuminate, reptivatis? 3 nervis, marginibus albo-mentoris; - exterior, linearitas in rufis, petalis rotundatis, fructu coadatu, vel genibulato-spirale * fol. flor. lanceol. dentatul; - with the former two, & *Peltianthus* 200. here very abundant.

[61]

July
14.

From the Two Woods to Lac Qui parte.

Started at 6 o'clock in the morning from our encampment, at the two Woods, N.E., passed several Lakes, covered with dangerous *Scinopus* (A.S.) &c. On a sandy elevation at the shore of a Lake 279. *Lithospermum squarrosum* with sed. with *Euphorbia* *perfoliata*. & 280 *cheiranthuslike*, glaucous, root fusiform, sent of *Raphanus*. — We encamped in the afternoon at Riv. aux Rats, a small stream with some timber in the low grounds, *Ulmus americ.* & *Tulip*. *Fraxinus* con minata, *Acer Negundo*, *Tytus virginis*, *Prunus obovatus*? *Ribes glaucum* & *Rosa parvifolia* in fruit, *Menispermum* common *Rhus*, and along the slopes the first appearance of *Asclepias verticillata*. There is a great many granite boulders scattered on the ~~upper~~ ^{lower} slopes, and also from Missouri limestone. Here we suffered a very severe storm through the whole night, so that we had to break up our tents. No rain. — J. E.

[62]

July
15.

From the Two Woods to Lac Qui parte.

Sunday. The storm subsided at 8 o'clock. We travelled on W.N.E. along this River on our right sometimes 2 miles off - this river has ^{in some places} very high banks, where we found: 282 the *Euphorbia variegata* in great perfection, and arranged after a ^{long} days journey of about 25 miles at the junction of Riviere aux Rats with the Beaver River. Weather as usual fair, cloudy in the night, but no rain. N.E.

* Another Southern plant of Mr. Elliott, though he mentions Missouri & Louisiana — This plant is certainly here so abundant as it can be in Louisiana, and still higher up it appears not less abundant at several branches of the Seine River, the River Eau de Vie, and last I saw some imperfect individuals at the junction of Watohwah and Makato River at the River banks, and on the same bank about 20 feet higher on open gravelly soil the *Euphorbia cyathophora* W. again a Southern plant of Elliott which is more abundant than the former on the dry sand on the banks of Lac d'Esprit & Titanka. Tausenaw spicigera? *E. cyathophora* is ascribed to the East Indies — —

[63]

July

Arrival at Lac Qui Parle.

We went on along the same River, which timber increases in vigour more & more toward its mouth at the St Peters, near Lac qui Parle, which Port we reached at 4 o'clock P.M. - Heavy Thunder Shower at night.

16

July 16.

July
16.July
16.

At Lac Qui Parle.

Monday. Sultry & cloudy weather. 283 Lygodesmia minor, on the dry hills, noticed at Traverse des Sioux; & very often found in great abundance, (Lac qui Lake) 284. Acerates folios lanceolati elongat. on all dry hills common with the former but more solitary. 285 Probably *Asclepias acuminata*, caule erecto, ramoso, obtuse-angulo, foliis subciliatis divergentibus, ovato-acuminata, integris, crassinervibus, supra pilosis, subtus glabris, venis pellucidis, floribus umbellatis terminalibus, pedunculi gener. parisi, subaequalibus; caule superiore pubesc. - Involucro polyphylo, lineare, dehiscente, - Calyx 5-part. rectinatis. Nectarin coriaceum. (pedunc. part. saccul. pubesc.) Glaucata. This plant is always to be found in the shades of the groves, in the river bottoms and always among the high grasses.

286 *Paspalum*

Gaudex crepitans
caule erecto gracile, tenuete, exanata, velutinose pubeso, lineato; - foliis tenuis, aequalibus, lanceolatis, supra scabris, subtus pubercentibus, nervosis nervo venis reticulatis, pellucidis; - Stipulis linearibus, acuminatis, membranaceis, fimbriatis; petio panti setosa (stipolatis), brevibus tenuibus & pilosis, - foliis paniculatis (spicatis) glutinoloto hispido - Calyx 4-fidus (spicatus, ~~versicolor~~ inf. major e intus,) albo sericeus, sepalum superius dilat. complanatus bracteis linearibus arum natis, villoso-siliatis, dictis centibus; - Vixillo notundato; - alis lato col. oblongis obliquis, - Corolla transversa, crispa; stigma truncata,

Hedysarum Concessus

[64]

[65]

margine varioloso, centro immenso. — Legume
magine articulata.

This very ornamental Plant appears first
in great Perfection on the Crooked & Pleasant
river bottoms in large bushes 3 feet high, the
panicles ^{& flowers} of a crimson color to of its height.
in the high grasses only - According to the
fruit it is the *Gledysanthus Canadensis*? It
is also very abundant along the St Peter River
& Riviere du Pomme des Ferre -

July
17.

At Lac Qui Parle.

Around the River & Lake on the heights is
the *Prunus obovata* (of mine) with *Symphoria* *racemosa*, *Acerous* & *Fraxinus*, the only trees
& Shrubbery; the timber in the bottoms along
the River is Soft Maple, *Fraxinus rubescens*
some Elms & a great many Poplar & Willow
— *Amorpha canescens* with *Rubertia purpurea*
in *Hornon* *Linum rigidum* & *Lygodesmia minor*.
Rosa paniculata is scattered on the heights; & *Asole-*
pia *syriaca* & *acuminata* in the coulers & in
the low prairie of the bottoms, with *Gaura* (288)
very abundant & *Ranunculus Gymbalaria*? covers
the inundated open soil. *Amorpha nana* is found
on the usual place among the grass, often lower than
the grass, a little elevated above the wet, now in
seed. This is said by the Indians is very much alike the
other species of the celebrated Buffalo Medicine, and
they say it only differs in the flower & root, & that very
species was to be found on the Mississippi with a
common root & Red paniculate flower the same
scents, form of the leaves & size.

The Weeds near the cultivated Grounds are
the same (with a few exceptions) ~~that~~ in the Ameri-
can bottoms. — Weather very sultry all day, with
thunder showers & rain - S.E. S.W.

July
18.

At Lac Qui Parle.

- Flight Wind & cloudy in the morning—
287. *Amorpha nana* N. in fruit. This plant appeared first after we had crossed the St Peter's river Rivière aux Liard — then in full blossom.
288. Gramen (*Utralepsis*?). This grass is abundant in wet bottoms & borders of Rivers, often 6 feet high.
289. *Ranunculus* hirsute or white — villosa with a small yellow flower, abundant in the wet bottom, high grade of the St Peter near L. qui P.
290. *Ranunculus* ~~P. gallicus~~ Remarkable abundant on the morasses, the stolones cover the whole surface.
- 291 *Ranunculus* ~~Japonicus~~: with the former & has been found in stagnant Water before near Sioux River. — not abundant here.
292. *Potentilla*, foliis tenuis, with Ran (289) abundant & 293 *Asclepias Syriaca* with its numerous both abundant. 294. Among the Symphoricarpos ^{and covered by} shrubs & Asclepias, *Syphium*, *Stellaria* Root creeping stem ascending, branching, zigzag & tangled, brownish pubescent, — foliis subsessile, opposite, divergent, branches patent divergent, axillary, flowers axillary, tubular, second; — Calyx pubescent, sepals rounded, truncate, corolla tubulose, valve ventricose, lower lip of the corolla angular obtuse, lobed, whitish, margins inflexed, upper lip erect, lobed, the middle one bifid, bright blue & white pubescent, corolla bend upwards in form — the leaves are cordate at base, oblong-lanceolate, acute, serrul. crenate, white toment. beneath, very little pubescent above. Weather ~~just~~ J.E. Rainy.

Lent. galericulata.

July
19.

At Lac Qui Parle.

We were preparing for our departure to morrow. The weather improved & the sky cleared up at 4 o'clock P.M.

We visited a mineral spring about 2 miles off Mr. Renville's Establishment, in a little valley near the Lake, surrounded by some timber most destroyed by the cattle. The temperature of the Spring was 46.5 at 2 o'clock P.M. (yesterday).

July
20.

From Lac Qui Parle to Big Stone
Lake.

Started from Mo. Pennville at 10 o'clock P.M.
for the Survey of Lac Qui Parle &
Big Stone Lakes over very rocky ridges
and encamped at 5 o'clock in the evening.
at the Riviere au Pomme des Terre -
This river is timbered, but the timber is of
smaller size than on the St Peter river.
~~the~~ variety is just the same. The bottom
on that place extended far out in the Prai-
rie - Raspberry were growing & ripe in great
quantities - The river is about 15 yards wide
& the current considerable strong - on Rotated
places in the bottom the 295 Rudbeckia with
pinnata leaves. This plant I noticed first in the
som at C. D. P. Perce, it is much smaller &
delicate on high situations, & a very orna-
mental plant; from the same place Gramen
which varies very much in size

296 Probably a Bromus. Weather fair. S. E.

[70]

July

21.

From Lac Qui Parle to Big Stone
Lake.

Started from our encampment at the
mouth of Pomme des Terre River at 5 o'
clock in the morning, after crossing it
I found on the slopes of its banks the
Aster (233) in abundance & full bloom. This
species of Aster is to be found on all high
gravelly situations, with the purple Aster also
but & Potentilla. and around it. never above
8" high. Liatris pyramidalis? very abundant
in level fertile places but not yet in bloom.

297. *Lysimachia* *Kadike perennis*
filosa, caule erecto ramoso, (caudice caespitoso)
4-angulare. - folia radicalia petiolata, linearis
lanceolata acuta, caulin. sessil. oppos. patens linearis
elongat. canaliculata, marginibus revolutis, unine-
vibus, subtus pubescentibus; ramis floriferis genicu-
lato-flexuosis, erecto-patentibus, floribus axilla-
ris et terminalibus (subgymnos); - pedunculis 4-angu-
laris filiformibus, lacinibus, ante aestivationem
pendulis, folia longiribibus. A plant which ap-
pears abundant in the short dense grasses on high
places in the prairie, when it appears it appears
abundant, caespitose without any covering & re-
markable fine yellow flowers. - Sepals Calyx lanceolata
acuta, lobae corollae rotundatae, abrupte - ana-
minatae. This is the true *Lys. revoluta* of Nutt.
Descript. Post Aster 233. Caudice caespitoso multi-
partito, caule erecto rigido, 1-5 floro, foliis
foliis decurrentibus patente-divergentibus, li-
nearis elongatis, ensiformibus saepe repli-
catis; 3 nervibus, marginibus & superficie
(nervis media canaliculata.)

Aster albus Willd.

[71]

July 21 From Lac Qui Parle to Big Stone Lake.

Leabnis, basi setose-fimbriatis, - floratia minuta; squamiae anthodii lanceolatae, acutae appressae, (stripped) ^{concoloribus} marginibus membranaceis,) pubescentia, veniculosae exaratae, - Radii 18? elliptico-lanceolatae, candidis; disco ochrobrave. Nerves & veins pellucid; leaves of a deep green. A very rigid plant generally abundant when it appears. (Corymbs level-top) inclined to little purple spots. 298 Allium with canaliculate flask to leaves, cornua before the aestivation, not rhipidous, the Allium cernuum of Roth. 299 Lobelia virgate & strict flowers dens & pale blue, probably the Lobelia Claytoniana of Michaux, very abundant in the short grasses on fresh places, often on dry & salty Leeks, with Lithosperm. (164) which is now in ripe seed & blossoms, both.) - Tradescantia virginiana still in bloom and some afterflowers of Anem. avonitifol. - 300 Gram with the former & Chrysosoma linearifolia abund in the high grasses. * 301 Another species of Lysimachia larger & higher than the former with elongate lanceolate divergent leaves, in the high grasses with blossoms of the high & low Prairies with later blossoms. -

We encamped at the granite masses near the Mouth of Irua river. Weather fair. N. W.
304 and 340.

July 22 From Lac Qui Parle to Big Stone Lake.

Sunday, 303 A little nitrous Panicum between the rocks & also on the heights, probably the Panicum scoparium of Lamark. 305. Petalostemum violaceum - 306 Polygalas verticillata Lin. 307 Salix Parashii? fol longissimis lineare-lanceolatis serrulatis On wet grounds near the River with 308 Rhus typhina? the common one. From the Rocks 309 Rhus with the former 310 Polygodiuni? out of the cracks. 311 Polygalas praeceps Nut. on the soil which covered the Granit -

Please on the shady part on the West side of this granite rocks I found the Mammillaria rubra in great perfection in flower & ripened. It appears on other granite with the Silene antarctica & dicentra & Lygopodium apodium? & with the abundant Yucca? Opuntia vulgaris in fruit & blossom on sunny places on the Rocks with Potentilla bipinnatifida & angusta. Fleary Thunder & Rain in the morning. S. E. & W. in the Evening.

July
23.

From the Mouth of Ixura River,
on the Right Bank of the St. Peters
along Big Stone Lake.

Started from our encampment early in the morning, crossed the St Peter River & travelled along the high ridge along Big Stone Lake, which is on this side about 120 feet or more above the level of the water. 312

Gramen Paspalum

Low & high situations near the Lake, - 313 with the former a 312

& 314 Petasites

petasites candidum. & 315 Paspalum with the former, encamped at a bend of the Big Stone Lake near the Woods on a little rivulet, 316 Clematis among the underbrushs. This wood are very luxuriant, the Tilia americana in blossom. 317

probably a Triticum. 318 Hyssopus officinalis (Pursh)
Caulis stricto ramoso, (candex ascend.) radix articulata
articulis fibrosis, - H- angulare articulata, glabro,
articulis pubescens (joints); - foliis pectiolatis, patente-diver-
gentibus, oppositis, cordatis, acutis, dentato-serratis.
subtus glaucis, pedunculus canaliculatis, pilosis,
- ramis patent-divergentibus; - foliis floratis (bracts
like) ovata acute-acuminata angustata (coarctata - ma-
gina) lata subcylindricus, 5 flos, pubescens,
coloratus, striatus. - Corolla bilob. pilosa, labio superiore
bilobo, lobis rotundatis. - Infr. 3 lobata Lobata media elongata,
reclinata, apice mucronata; - filamentis elongatis, exer-
tis, divaricatis - Anther. reniformis, bivalvis, ~~reniformis~~ nuptialis,
elongata excta, fuscata, filament. aquarante. Planta gymnosperma
ornata, floribus caesiis, foliis nitidis, subtus glaucis, corolla externe pilosa
varie lobis impressa villosa. This plant appears on the slopes of the woods near

[74]

July
24.

From Big Stone Lake, up the Cotecawde Prairie.

Started from the Rivulet at Big Stone Lake, at 5 o'clock, crossed at 8 o'clock the River au a Cote, towards the Cotecaw S. E. 322 Syngenesia in flower before flowering (Collected at the Lac des Tonnerres with Allionia 312), Lygodesmia minor, Artemisia borealis both Tetragynous; Amorpha canescens - Low Prairies along side of rivers & ponds 322

arrived at 3 o'clock P. M. at the beginning of the Cotecaw de Prairies and encamped at 4 o'clock on the Ridge of a cotea with a little timbered stream containing oak, ash, poplar, and on the high ground ^{15 ft} Situations, the Hippophaea - velly Slopes on dry situations. the Rudbeckia purpurea which is so very abundant. and from the coals with the former 325 Cornus alba, the Bais rouge of the Canadian travellers, the bark is used as a substitute for tobacco.

feet high, the leaves, ~~which~~ a taste & smell, resembling Aris, often with a simple spine, but perfect ~~in~~ it is often somewhat paniculately branched [75]

July
25

At the Coteau de Prairie.

Post Syng. 322. Radice cando, fibroso; caudice multi-
partito, caule erecto, ramoso, foliosa, terete, tomentosa, rigida;
foliis sessilibus, alternis, patente divergentibus, alterne &
interrapte pinnatifidis, ~~bipinnatifidis~~; (pinnulae line-
are-lanceol, albo ^{roseo}-cuspidatae), univiriae,) albo tomen-
tosis, floribus term. corymb. panicul. — Anthonio imbricato.
Iguamus ornata-lanicolatis, cuspidiatis, superiores elonga-
tis, membranaceis, coloratis, (Platod. hemisphaer.) Radice
20-30. linearitus, ligulatis, subtruncatis. — Pappus setosus,
penicillatus, peniculis albo ~~roseo~~; — Planta argentea
toment-villosa, foliis setose-cuspidiatis, ramis paten-
tibus, aequale paniculatis vel corymboris, floribus co-
reis erectis.

A very heavy thunder storm early in the morn-
ing, by 66, 8° temper. cleared up at 7 o'clock, star-
ted off in S. E. 45 miles of from Lac Qui Parle,
at 6 o'clock we encamped at a little woody
center 8 miles distant, passed over high tops
of ridges, covered with Psoralea etc. & Rudbeckia sp.
& Astragalus (176.) 326 a species of Sonchus or Lac-
tuce not in blossom only found on this place.
with Liatris & Helianth. fol. sagitt-lanceol. — Weather
fair lightning & Thunder at night. S.E. W.

July
26.

At the Coteau de Prairie.

Started at about 5 o'clock from our encamp-
ment, passed over very broken & undulate coun-
try; — Rudbeckia fulgida in wet places abundant
Galanthia on gravelly heights in seed, — Amorpha
& Lupinus less abundant. — Rudbeckia purpurea
pinnata, & both Petalostemum with Aster 233. Ly-
godesmia minor all in full bloom. Xerophyllum as-
phodeloides & Heather com. in ripe seed, als Bonalea
erubenta, — Leptate 318 in bloom so slopes down to the
valleys, — The timber in the valleys in very depre-
& branching, never reaches the heights of the
surrounding ridges. On rotated places the

327. Atriplex

328. Gramen

329. Gramen Andropogon } dry situations.

330. Plantago } fol
lanceolat glabris canoris } Salt Licks
331. Sporocaula brevi scand. tenuis } low situations.
fol. longit, pat. herb. lanceol.

Fine & clear day a very heavy thunder storm
at night toward morning. I. W. We en-
camped at the 4th branch of Iowa river.

July At the Coteau de Prairies.

27. Started off from our encampment at 11th
10^m crossed ^{Sandstone} the Chana Waton river and en
camped on its mouth in the Chana Waton
on a little Conic mount. Weather warm
& clear heavy Thunder & rain at night.
From the Sand stone river 332. *Potamagoton*
folios ellipticas.

28. We started at about 8 o'clock & travelling
about 30 miles we reached Lai Qui Parle at
6 o'clock P.M. - At the coule near the river
334. *Gramen*

335. *Cupatorium* *folios long*
rectatis, ovatis, acuminate, serratis & verticil-
latis, flor. pallide-purpureis. from the
same place.

From this date up to the 24th of
Aug. 1st we remained at Mr. French's. After
Fin Comp. Establishment waiting for favor-
able weather for the many observations &
preparing for our departure. The 4th
the 5th Mott depicted in two hours down the N.
P. River foot 12 o'clock P.M.

August
13th

From Lai Qui Parle to Patterson,
Rapids by Land, under M. Fremont & G.

Left from Lai Qui Parle at 7 o'clock in the
morning & crossed Chippewa River at 9 o'
clock - *Astragalus ochroleucus* abundant,
with *Petalostemon violaceum* & *Melianth.*
(200.) *Panicum?* (296.) with *Melianth. folios gla-*
bul. subsagitt. & abundant *Solidago* in bloom
with the *Labiatae* (318.) the *Sonchus* (226) appear
in the bottom-prairies, all on and along the
bottoms of Chippewa river with *Gramen* 336.
scattered also on the heights. - The bottom
this river & on that place is very exten-
tive more so on the right bank with some oak
& maple timber. - On our road on more eleva-
ted Prairie *Liatris spicata*, often in moist places
with *Spiraea salicifolia*, ⁽¹³³⁷⁾ *Solidago folios glabri*
& *nitidis*, *Vernonia pectata?*, 12 o'clock in the af-
ternoon we reached the Lake of the black Oak,
(this is name designates burned oaks.), *Veronica*
virginica L.?) in groups together intermixed
with some *Liatris*. We arrived at the Eau
d' Vie River at 6th 15^m where we encamped 27
miles from L. Q. Parle - A very heavy thunder
shower this afternoon by 36.0° at 4 o'clock
it cleared up in the West at 8 o'clock in the
evening.

August
6th

From River Eau de Vie to Patterson's
Rapids.

We started off from our C. at the Eau de Vie River at 9 o'clock in the morning, crossed the river, on the gravelly banks on the other side 338 *Gerardia pubpurea* with 339 *Cercopsis bipteris* with 340. *Solidago pubescens*, with *Linum rigidum* with *Scutellaria parvula* abundant, with both *Petalostemon*, *Liatris spicata* & *Aster rigidus*, *sericea* & (*foliolosa*) & *Solidago* (337) *Allium vernum*. — Obs. In this situation is (338) & (339) the most figuring on the high dry gravelly soil next (339) the rest scattered. — The course of the River Eau de Vie is visible for many miles by its high banks, woods on its slopes with *Tilia am. Ulmus americana*, *Negundo fasc.*, *Pipulus grand.*, the *Vitis riparia* & *Hemis. canad.* *Rosa parifolia* & *Amorpha fruticosa*, *Symph. glomerata*, &c., 341. *Oenothera biennis* on the open gravel of the banks very abundant with *Hedysarum canadense*. In moist places in the prairies the glaucous dense-pinnulate grasses with the lanceolate *Helianthus* & the silvery, lanceolate *Asclepias*. — We arrived at 3 o'clock P.M. at the Patterson-Rapids St. Peter River, & encamped on a high ridge of the bluff where we had a view of several miles over these immense scattered masses of granite, scattered in great irregularity, resting on the alluvial of Wethers beautiful, though very foggy in the morning N.W. (20 miles)

August
7.

At Patterson's Rapids, waiting for the arrival of Mr. Nicollat.

Cut of the swamps near the River with *Pedicularis pallida*, *Eupatorium* (335), & *perfoliatum*, *Asclepias acuminata*, *Lysimachia ciliata*, *Ranunculus* (289.) with *Gaura* (336.) *Silphium connatum*, *Labiata* (318), the common white *Coronopus* and others.

342. *Aster Radice repente*, *vandine* bractea
rauce elongata, erecto, folioso, lineato, albo & interse-
pubercente; - foliis uniformibus, cordato-lanceolatis,
acuminatis, sessilibus & patentibus, (ellipticis)
basi angustatis, marginibus scabris, subtus albo-
villoso, 3-pli-nervibus, subundulatis, floribus ter-
minalibus corymbosisi pedunculis, brevibus inca-
satis, lineare-bracteatis; - *Anthonidis cylindrica*,
squamis articulatis appressis, viridis, margini-
bus membranaceis, albis; - ligulis 6-10, ellipticis
& brevissimis vel lanceol., obtusis; disci latero pro-
prio plumos. This plant appears also on higher
& often on gravelly situations & its leaves are
then more narrow, and the whole habitus of the
plant is diminished, generally about 20 inches
high. I found it abundant in some places with
the narrow-leaved *Lysimachia* under it. — Cut of the
canal 343. *Rubbeckia*

with 344. *Salix* this willow with another
different species cover the Ravines in low
shrub, there was nothing to be seen of the fruits
345. *Flolianthus lanceolatus* hastatus. This
plant is very abundant on high situations, in
lower places the habitus is quite different, the stem
is naked & bears many flower, when those on the high
places have generally only one flower. Weather fair

Aug.
7.

At Patterson's Rapid, waiting for the
arrival of Mr. Nicollet.

346. *Vallis* with the former. 347.
Lechea major with *Peltostemon*, so that
the last is the first in the groups.—
Mr. Nicollet arrived exactly at 12 o'clock
noon, and we separated & both parties
left the place at 2 o'clock P.M. — we pas-
sed a swampy & disagreeable road, high grass
where the *Peltost* was also very abundant.
(this is the more remarkable as this is often
the only plant which is found covering the most
sterile situations), it was grouped with *Liatris*
spicata, and both in full blossom, also *Astro-*
galus obsoletus gr. with the same *Liatris*; often
mixed with *Pterocaulon*. — On some moist
places in lower grasses *Solidago laciniifolia*
& the *Lysimach. angustifol.* with *Lobelia Clay-*
toniana 348. *Plabenaria blephariglottis*.
with Graven (336). we arrived at Castor River
at 6 o'clock, 17 miles from the P. Rapids.
where we encamped. Weather fair, Wind S.E.

Aug.
8.

From Castor River to Lac aux Jones
(near Petite Roche, St Peter River).

We left our encampment early in the morn-
ing; along the bottom of the above River
in the high grass the 349. *Veronica vir-*
ginica, there was very little variety in the
flora of the journey of this day, being a con-
stant repetition of the former. We travelled
27 miles. Weather cloudy, sultry, Temp.
9 o'clock 65, 0.° S.E. cloudy. — 12 o'clock 69, 0.° dry,
sultry, S.E. — 3 o'clock P.M. 71, 8.° cloudy, sultry S.E.
Arrived at Lac aux Jones at about 6 o'clock
in the evening. —

Aug.
9.

At Lac aux Jones, near Petite
Rocker St. Peter R.

The timber around the lake is most
the same, except some little trees of the
Red oak appeared towards the St. Peter
River. *Liquinaria* 350. *Pledysarum*, ~~hirsutum~~
~~hirsutum~~ ~~hirsutum~~ ~~hirsutum~~ *acuminatum*.

351. *Solidago (virgaurea ?)*, Radice repeat
crasso, caudice incassato, caule erecto rigido,
terete, lineato, hamate-piloso, pubescens, fo-
lioso, foliis caulinibus lanceolatis, sessilibus
& patentibus, acuminatis, ex medio serrati-
tis, 3-fili-nervibus, reticulatis (nervis & nervis
pellucidis, marginibus scaberrimis,) pubes-
centibus subtus pallidioribus, panicula se-
cunda, racemis foliosis, divergente recar-
vis, flavo-virgentibus; - Anthrod. cylind. bat-
dilatato, squamis appressis linealibus, inesse
tis luteis, viride-lineatis obtusis & hamata pi-
losis, spirale vel turbinato-imbricatae. Fl. ligul-
12-15, regularibus, lineatis, apice truncatis.
3-dentatis, 2-pliatis, divergentibus, (subcon-
cavis, brevibus aureis,) On high & low situations
generally found on rotated places with the
Liatris 200 & *Rudbeckia* (343.).

Post *Helianthus* 345. Radice serpentaria, cau-
dice brevi, caule stricto, gracile, elongato, terete,
scabro, hirsuto; foliis petiolatis, decurrentibus,
oppositis, divergentibus, patentia lanceol. basion-
gustatis, integris, serratis, acuminatis, 3 nervi-
bus, reticulatis, scaberrimis, - Subsessilibus,

[84] foliis

Aug.
9.

At Lac aux Jones, near Petite
Rocker St. Peter River.

supreme & floralia erete - patentia, subop-
posita, hirsuto-fimbriata, petiolis exara-
tis rubescens, elongatis; - *Iguanis antho-*
dii ovatis acutis appressis, fimbriatis, gla-
bris & exorates; - Radice 16. elliptico-lance-
olatis, plicatis, Sigma novol. bifida, very
abundant on dry & high gravelly situations
1-3 feet high.

352. *Liatris macrostachya* Michx
353. *Andropogon* with the for-
mer.

354. *Artemisia* the most
common on rotated spots & on the side
of sandy bluffs near the Rivers & often
abundant & in very different habit in
the bottom intermixed with ~~the~~ (acciden-
tal location) of many different Plants of
ten more disguised than they would be by
cultivation.

355. ~~Scirpus~~ *Tonchus arvensis* This plant
I found on the borders of the outlet of
Lac aux Jones, & again in the prairie near
the St. Peter River (opposite to the right side
opposite Swan Lake crossing place).
caudice multipartita, caule elongato, e-
recto, ascendente, folioso, foliis diversis,
lanceolatis, acuminatis, acute, dentatis,
hirsutis, (cum caule supero tenui) floribus dense.

[85]

Aug.
9.

de Lac aux Jones near Petite Rocker
St. Peter River

corymbosis terminalibus; - (receptaculo squamuoso), anthodio calyculato, squamis calyculi semilanceol. acum. spicis revolutis. - Squamis anthod. lance-acum., elongate appress.; - ligulis lineato-vanecatis, diversgate-divaricatis, 5-dentatis, auriculatis, disco ligul. auriculatis. On the border of the Woods near the Lake.

This night we had a tremendous shower from S., it commenced after sunset with a violent wind & lasted until 9 o'clock. Mr Fremont spoke Mr Nicollet on his Survey at the little Rocks St. Peter River. Dist from Custer River to Lac aux Jones according Mr Fremont 21 miles.

Aug.
10.

From Lac aux Jones to the Traverse des Liard at the St. Peters.

We proceeded at 6 o'clock in the morning. The atmosphere was light but dampness & clouds lasted until 12 o'clock noon. We crossed Jones River and several other small lively streams. - The road we had to pass was still worse, the Flora precisely the same. - We arrived one hour before sunset at our former crossing place ^{near} at the confluence of of St Peter & Rux Liard river where we met again with Mr Nicollet who arrived one hour before us.

Temperature 72, 5° 30' cl. P.M. 79, 2° N.W. 70, 2° at sunset N.E. Cloudy. Distance of the day 21 miles - .

Aug.
9 11.

At the Traverse des Liards.

We had a feast at the Village of I-shackimba. (Sleepy Eye.) & were served with boiled wild rice (*Tizania aquatica*), the Indians were engaged in collecting their crop of corn, and were much disposed to improve in agriculture. The Mais of these Indians has been propagated down from the upper tribes & is now cultivated over the U. St. — At the evening they gave us a grisly bear dance, which was well performed, particularly Ran-wetayementoka, (Male de Coeur) —

12.

Among the Willows on the River borders 356. *Chelone glabra*? with the *Sonchus maritimus* (294.) *Polygonum* and others we had fair weather, N. — S.E. — N.W. We have still beautiful weather, but we were compelled to see no prospects to Traverse des Sioux, for the arrival of which we are waiting. Weather fair — S. E. — N.W. —

Aug.
13.

From Traverse des Liards, to the Survey of the Makato-River & its tributaries and Mr Nicollott by Land.

We were divided into three parties, all of them departed for their duty in the best order & at the same minute. Mr Fremont with two canoes took the survey of the St Peter & the Makato by water — Mr Nicollott by land, whom I accompanied and the rest of our transports were sent forthwith to Traverse des Sioux. All were in the best spirit. —

After we crossed the St Peter again, we had right afterward to cross the Riv. aux Liards at 9 o'clock; here appears the the Red oak more abundant with the *Betula populifolia*. The village of Sleepy eye is a beautiful and well timbered bottom, very rich soil, with some elevations in the prairie which command a view almost over the whole surrounding country. 357. *Pyranthemum virginicum*? with 358. *Eryngium aquaticum* with *Liatris spicata* & the high *Digitaria*, We reached Long Lake about 6 o' clock where we encamped with fine weather and a high Earth.

Aug. 14. From Traverse des Liards to the Makato River.

We left our encampment at Long Lake at 7^h 30^m. and arrived at 9 o'clock at the first branch of Makato River, the outlet of the Long Lakes. & we crossed it at 12 o'clock. The River has the same timber as the des Liards. - At the heights of the second arm of the Makato in the open Prairie, 350

feet high? 4, 5, 6-7 feet high scattered over the wide Prairies. - The Indians eat the gum which is generally found on injured places in the axills of the leaves & the perianth. It stands generally alone, under it some Liatris, & Eryngium aquat. After we crossed that branch with some difficulty we encamped on a high & narrow ridge by side of a Slough, close by the river. - On that ridge 362. Kuhnia Capitatoidea, which we often saw on gravelly elevations of the prairie (perhaps a different species) 363. Lespedeza canadensis lignos. oribos; culm stricto gracile - ringato, tecte, caarato-lineato, lin. albo-tomentosus, foliis petiol. patent. ternatis, unilateroal. - folia la lanceol. obtuse (basi & apice) uniformius, pubesci, subtus albo-tomentosa i - panic. pyramidalis. fascia. rara multi-setato, flor. fascibus parisi, calyx 5 dent. (basi subventrica, ^{oblique} equata, subercente-lineata, divergentis; Corolla minuta, canina truncata, vexillum subcordat-acutum, (colorc glycine Apis) rosace.

The whole plant has a pallid green appearance it is only found on the rise of hill, on gravelly soil & not very abundant. Temp 40° Morn 54, 6° S.E. cloudy — [90]

Aug. 15. From the Junction of Perche Lake River & Watonwan River to the Makato.

361. Polygonum persicifol? with 300. A maranthus both on the banks of Watonwan River,

in the Prairie with

364. Eryngium aquaticum. We left our camp at 6 o'clock in the morning & arrived at 9 o'clock at the Makato river a few miles below the mouth of the Riv. de Coteau de Pr. Creek & the outlet of a group of Coulees-swamps & Sloughs. - We met several Indians of the Wappakunkie band from whom we got a supply of Buffalo meat which they killed near the Deneuve head waters.

There in the hazel bushes was Silene (Cucubalus) very abundant. - We left that place at 3 h 40^m P.M. & encamped about 6 o'clock on the same river about 10 miles distance. Here this river is very interesting, we found in the stratified bank, stone bed, & there is no doubt that the whole region belongs to that formation. The current of the river is very swift & the bed was about ten-15 feet, the width of 60 feet. On the banks

365. Cassia chamaecrista. Temp. of the day Sun rise 61, 8.° calm &.°

9 o'clock 64, 5. Cloudy gentle breeze from W.

12 o'clock 76, 0. Cleared up. W.

3 o'clock 78, 5. 0 clouds, sultry. ~~Thunder~~ distant Thunder at night, no rain.

0 o'clock 67, 0. S.E. Cloudy & sultry. Noon. 70, 0.° Cloudy sultry, S.E. - 3 o'clock P.M. 69, 5.° Cloudy, sultry sunset 65, 12.° Cloudy, distant Thunder — [91]

Aug. 16. From the Makato river, in the District of Sleepy Eye to the place where the blue earth is found.

We left our camp at 10 o'clock westward. The country was very beautiful & rich - The prairies between the rivers are even & not much filled up with shrubbery, except close by the rivers - The same Silphium is scattered all over the prairies, reaching high over all other plants. in swampy situations 366.

367. *Gerardia austriatula*, In the high grassy borders of Woods, foots of bluffs, bottom-brushes -

368 - Gramine. With it the *Andropogon* (353). Passed the Rocky & rapid Watertown river at 12 o'clock, this river is full of Fluviatiles 369. *Potamagnotus* narrow leaves - 370. *Potamagnotus* with lanceolate & ovate leaves. We took observations on the junction of Watertown & Makato rivers, the river banks are found 20 to 80 feet high, the country is still more beautiful - we proceeded on about 5 miles more & encamped on the Makato from which rocky banks we could see above the Woods and the windings of the river, this scenery is beautiful, the river is often interrupted by rocks & rapids the banks are about 100 feet high & sandstone with lime in perpendicular distinction covered with *Betula* & Red Cedar) - On the Water edge among *Eupatorium* 371. *Lobelia siphilitica*. 372. *Alyssum* (with the Campanulaceae) 366. 373 *Euphorbia diversifolia* scattered in the open day gravelly banks high -

Aug. 16.

From the Makato river in the Country of Sleepy Eye, to the place where the blue earth is found along the same river -

373 *Chrysocoma linariifolia*. - We left this place after we took the necessary astronomical Observations & arrived at about 6 o'clock at a very interesting & romantic place on the Makato River. The banks are intermixed by the Sandstone Rocks & the River ~~comes~~ is divided by an island & is foaming over the Rapids, here the *Campanula rotundifolia* was still in blossom on the crags of the Rocks. There ³⁷⁴ the Woods are composed of more species of oaks the *Quercus macrocarpa* Linn. & ³⁷⁵ *rubra* Linn. 377.

Panicum? ³ *hirsute* panicle very long & spreading only on the little rapids St Peter Rds) 378 *Lechea minor*.

379. *Lespedeza prostrata*. 380. *Lespedeza* whitish strict Cesp. red spikes. 381. *Eupatorium perfoliatum* River border. with 382

The most common of the climbing Leguminous plants. 383 (higher th ridge, *Asclepias tuberosa* - 384. in clubs strict 1^{1/2} feet high, 385.

from the Water edge This country around the Makato increases in beauty & fertility the more we approach their junctions.

Temp. 54°, 0° N. Clear sky - 9 o'clock, 72, 2° N. clear 0° - Noon 81, 5° clear, high fine breeze W. 3 o'clock 81, 5° N.W. clouds, Just set 71, 2° C clear N.E. - I was unable to ascertain the na-

rivity of timber on the other side of the river on account of the high water & not being provided with a canoe. It is said that the Black Walnut & Butter nut is abundant, I saw none on the left bank -

Aug. 17. To the bank, where the blue earth is found.

We left our camp shortly after sunrise, about 5 miles West we reached the bank of the rock, at the Makato, where the blue earth is found. At the borders of the Woods we saw groups of *Betula populifolia*. *Rosa pauciflora*. Pop. grandident. The woods near the river contain a great variety of timber, *Populus nigra*. *Troximus acumin.* Different kinds, seeds of *Trillium erectum* ripe (No. 94.) ripe seed. also *Aralia hispida*? in seed. *Cyparis obsoleta* (black choke berry) in ripe fruit — under hazel bushes near the Woods 386. *Pyrola rotundifolia*. 387. *Pedicularis pallida* with *Eupatorium* in swampy situations. — The place of the blue earth has an almost perpendicular rock (Sandstone carbon) the very banks of the River, about 200 feet above. We got some of it with great difficulty ascending & descending the heights. Red Cedar & Oaks dress these rocks, at some distance they appeared most naked, here again is a sand-bar islands in the river, which is here as rapid as above; — we took our way back to our Camp, having about $1\frac{1}{2}$ mile to pass through thick Woods & bushes. 3 o'clock we took our way off and arrived about sunset 1 or 2 miles² distance from the St Peter's River, scattered in the prairies with the *Glycine* (355) in the prairies with the *Cantharis americana*. *Liatris hastata* *Eleocharis*. 388. *Cantharis americana*, abundant under scattered oaks in the P.
Temp. Sunrise 50, 2°. Heavy dew. — 9 o'clock 75, 0° SW. clear sky, noon see observations; — 3 o'clock P.M. 77, 0°. Cloudy SW. fine breeze. — Sun set 88, 0°. East S.E. moderate.

[94]

Aug. 18. Crossing of the St Peter River, opposite Big Swan Lake.

We started from our encampment at about 4 o'clock P.M. after we arrived at the road of the Red-river people, we crossed the river at 6 o'clock in the evening — 389.

() north *Lysimachia* (297.) in damp prairies, & low grass. — Sun rise 52, 2°. clear N.W. — 9 o'clock 72, 4° clouds N.W. — Noon 81, 0° high breeze from N.N.W. 3 o'clock P.M. 81, 0°. Slight. calm — Sunset 75, 0° S.W. clouds. —

1957

Aug.
19.

From the crossing Place, opposite Swan Lake.
to the Am. F. C. Establishment at Traverse de Sioux

We left our camp at about 8 o'clock, arrived at the Woods of Lake Milieu at 9 o'clock. - Dense groups of *Silphium compositum*, sparsely scattered over the borders of lakes, along the river Bois rouge? we saw again the *Silphium glutinosum?*, scattered along over the prairies about 7-9 feet high. —

Temp. 72, 0 at sunrise & clouds, high S.E.

- 9 o'clock 76, 5° & clouds, high S.E.

- 12. o'clock 81, 5° Calm. Clouds & S.E.

- 3 o'clock 80, 0° S.E. & clouds.

Sunset. 78, 2° S.E. cloudy all over.

Arrived at Mr L. Blanv's Am. Fur Co Establishment at 4 o'clock P.M. where Mr Fremont had already been waiting for 2 days past.

[96]

Aug) At Traverse de Sioux.

20.

On the sandy elevations near the Fort, the *Petalostemum villosum* Nutt. Root subligneous, tenacious, caudex nodose, many parted; - stem suberect, branched humili, terete, sublate, silky villose, foliose; leaves pinnate, divaricate, every where sessileous villous; - leaflets elliptic, perforate-pellucid punctate; - ramulis patentibus; floribus terminalibus paniculatae-spicatis, spiralis imbricatis & compacti cylindricis pedunculis sub-reflexis; calyx sessile, minute, 5-dentate; sessilis - villosus; Corolla irregular papilion. 5-petala, petal. subspatheolate vestitum often bidentate & longer unguiculate than the rest. & inolute; - stamens diverging stigmas incurvus subequal; Anthers riding & peltate; - A suffruticose & subligneous shrub like Amorph but its stems die away every year. I found it only on that place & collected the plant before blooming in June; the root is of a bright cinnamon color & the flower pale lilac & fragrant, the whole plant is beautiful & of a silvery habitus. Perhaps a *Dalea*? with the former Amorphous concrens the low *Pyrularia*, *Solidago pyramidalis*, & *Solidago nemorosa*, *Liatris hirta* & macrostachys, *Anisognathus argenteum*. - 39 o'clock, *Solidago*, Root subnodose? repeat fibrose on one side, caudex with many stems. Stem erect almost strict, rigid, foliose, glabrous. Ultra-triangular-folia radicall. long petioled, decurrent ovate-lanceolate, out of the middle dentate, reticulate, nerves & veins pellucid; margins seaceous, glabrous [97]

Aug.
20th
21.

At Traverse des Sioux.

Gauine leaves lanceol., subdentate, supreme leaves & floral ones lanceolate, minute - panicle regular pyramidal, racemules patent, involucellis; greenish yellow with the bractelets - anthodium or Perianthium imbricate, scales of the anthers, lanceol., obtuse, appressed, verrucose; - Rays about 7, elliptic, divergent - the most symmetrical of the whole genus, generally on sandy soil, hill slopes & dry prairies in general, abundant here with *Petal. villosa*. On the naked sand 391. *Phallus caninus* of reddish pink color, reflexed - 392. On the same place 392. *Cyperoidea* with 393. *Liatris*. Root uniform very thick, caudex flat & much divided, stem erect, rigid, brittle, leafy, linear & pubescent, leaves linear subensiform? elongate, patent, rigid, black punctata, subciliata; - Inflorescence in appressed spikes; - anthodium cylindric, - scales on lanceolate, acute, colored (aspidate?), florets 4-7, corolla tubulose, 5-cleft, ~~sharp~~ lanceolate reflexed, the pistil divided in 2 from the middle, the segments reflexed, linear & angular, serrated & ciliatus; - Pappus plumose, colored - This plant is scattered over every high & gravelly situation & sandy soil, more less abundant & perfect on the Coteau or Prairie, the color is of a vivid pink or lilac with crimson, general height 18", with squarrosa & spinosa - in great perfection, with the lanceol. pyramidal *Artemisia* - the remaining stalks of *Batelia*, *Gmelina* *Stipa canescens*. the (*Phleum*) *Polygala verticill.* cone-

[98] ope

Aug.
21.

At Traverse des Sioux.

lis trip. *Helenium* 345. *Gennaria* caudata, *Lachna* both sp. of the marsh. The small *Paspalum* & the middle are prevailing with the *Phleum* - *Galago* (340) Root repent, stem erect, recurved, brittle, pubescent, radical leaves long-petiolated lanceol. out of the middle serrate, everywhere scabrous, peltate reticulate, often subfalcate; - Gauine leaves lanceolate, acute-patent, Supreme leaves incurved, subcordate, acute; - panicle second, the point or top reflexed, racemules, patent, top recurved, anthers, ovoidoid, scales imbricate, appressed, unequal, linear & semiterete, obtuse, colored. Rays about 9, patent - Divergent, lance-acute, bipinnate, regular; On dry soils, Woods & prairies, banks of rivers - This plant is easily distinguished from the other species by its reflexed stem & second panicle, grayish habitus often, & curved leaves - with the former & often in moist grassy places in the prairie. 394. *Liatris squarrosa*. Root bulbous tuberose, bulb often cordate, (generally plain or eng. on the top) & fibrose, caudex collate, stem strict, elongate, leafy, terete, subsulcate, lined; - radical leaves erect-patent, petiolated, lanceol., elongate, with one flat nerve, and perforate-punctate, rigid & coriaceous; superior leaves patent diverging & with the ends incurved, linear lanceolate, acute; - Supreme leaves & floral ones linear minute, incurved; inflorescens remote-spicate, flowers subterminal, axillary & patent; - anthodium conic., scales rotundate, involute, from the middle amaranth colored; Corolla tubulose, 5-dentate; - Pappus plumose, longer than the segments of the corolla; - Stigma little colored except, very acute & angular pubescent, Weather fair - high S.E. Thunders [99]

Aug.
6
22.

From Traverse des Sioux, down the
St Peter River.

After our boat was loaded we left the place about 12 o'clock at noon - The day was very hot & dry also, towards night it got cloudy & the wind from S.E. brought a gentle rain; which continued after 12 o'clock at night & continued until 7 o'clock in next morning, when the wind changed to N.W. & it cleared up about 8-9 o'clock - We encamped at Little Rush River -

[100]

Aug.
7
23.

From Traverse des Sioux down the
St Peter River.

After the weather had a little improved we left our encampment, at 8 h - The bottom grounds near the river are filled up with Silphium Connatum & the high sandbars, both in full blossom, & the umbelliferous Sambucus, with green berries, - with the Avenacea or Bromus (368.) & the Leersia with the clavate shoots; - Solidago (351.) Iva (Trifolia), Teucrium canadense, & the blue Veronica, and 395. Artemisia Root serpent, stem strict, elongate, terete, lined & flowerless - tomentose, outline leaves sessile, patente-divaricating, lanceol. acumin. out of the middle dentate, acute-serrate, shining above, silvery tomentose beneath - nerves green, Stipules appendiculate, whole plant & the panicle pyramidal, bracts & bractelets axillary, pectinate, rigid, racemules axill. 3-5 flowered; - floral leaves linear-lanceol. acute, minute, - flower or peduncles reflexed, - anthers duplicate, outer scales lance-ovate; green, smooth; imbricate; inner ones peltate & membranaceous, ovate & crispate on the margins, very short, brownish & reflexed. - This plant is most abundant on sandy plains & elevations, bottoms & bluffs but it differs very much in size & cover in diff. situations. - From the little rapids on the Rock, 396. Euphorbia hypericifolia with the Gramen (384.) with the high Pargolum on the Water edge. - 397. Phescolosus on open soil on sunny situations, on ravines, & banks of Rivers, stony & gravelly ^{banks} shores of ponds & lakes 398. Paw. - covering the sandbars in the river.

[101]

Aug.
24. From Traverse des Sioux down the St.
Peter River.

We were very much annoyed last night by a sudden change of wind & weather, after midnight the wind changed again to S.E. and a gentle rain followed for several hours, at 9 o'clock 30 m. the wind shifted again to N.W. when it cleared up, after which a beautiful day followed. From the sandbars with the former mentioned:

401. Root fasciculate-fibrous, stem divided, branched, tetrate, s. abrous & shining, Caudine leaves semiamplexicaule, divaricately diverging - leaves acuminate, remote & acute serrate; (opposite and connate at base) paler beneath; - branches diverging; - infloresc. terminal, flowers subsessile, short-peduncled; antherodium calypulate; Calyx lobes leafy or leaf shaped regular, the leaflets elongate, lance. obtuse, with the margins scarious like the stem leaves; - leaves of the stellate. panicol. acute, appressed. Colored & brownish-lined - Rays elliptic about 8, 3 dentate, 2-pliate, shorter than the ~~calyx~~ lobes, Divergent divaricately, golden yellow, - among Willows, in Sandy Swamps & Sloughs, - 402. Sagittaria latifol & 403 Sagittaria angustifolia 404 Ranunculus with the former 405.

former, - The Water edge all along full of Sagittaria
(402)
var, with Amaranthus pumilus Nutt? & 399 a
Common low, with Gramen 400.

Weather beautiful, we determin. to drift down the river all night. Clouds from the N.E. about 10, o'clock. -

[102]

Aug.
25. From Traverse des Sioux down the
St. Peter River.

Vitis riparia in ripe fruit. 10 o'clock we reached Li's Village. On the River banks & edge of the Water. 406 folios 3-5 lobis - 407 a very scarious Gramen. 408. Zizania aquatica in the Water with Sagittaria. 409 from the banks of the River -

410. on our last encampment, with 411. Urtica with horisonatal fan-shaped racemes; with 412 Urtica with verticillate racemes - with the high Carduus 413. & 414 Helianthus, Started from our encampment about 10 o'clock & arrived at 3 o'clock at the entree at St. Peters. Weather fair. N.E. -

[103]

Aug.

At St Peter's Mr Sibley's Am. Fur Co Est.

26. At the Pilot Knob & on all elevated dry gravelly prairie situations 415 *Euphorbia corollata*. extends down to the margins of the woods, with 416. *Aster sericeus* which is one of the plants omnibus locis but only on such soils which may be properly termed barren gravelly soil. 417. *Prenanthes serpentaria*, on the slopes of the bluffs among hazel & other bushes, mixed with all those rough plants associated among the hazel in the prairies & shrub on the borders of Woods, 418. *Vallisneria spiralis*, this remarkable plant I found in the Water of the Mississippi, close by the junction of the St Peter river. on the water edge on muddy places floating. - 419. *Iva pinnatifida* of my remark book, properly the *Ambrosia elatior* of Linne I believe grows on isolated spots on the high & lower prairies, sandy shores of lakes & river & abundant near cultivated grounds. often with the *A. trifida* which is very abundant around the foot of the bluffs at St Peters & generally also near cultivated ground, particularly along the St Peter river near the Indian Corn fields at Lae Qui Park, - mixed with the *Bidens* - 420. *Liatris squarrosa* - A plant which is found generally very abundant when it appears, on dry sandy plains, on slopes & tops of elevated gravelly & sandy prairies often with the *L. punctata* of Willd. abundant near the Pilot Knob & at the sandy borders of Woods more abund. at the sandy elevations at the Tra-

[104] verso

Aug.

At St Peter's Mr Sibley's Am. Fur Co Establishment.

27. des Sioux, a very ornamental plant. - 422. *Ptero- caulon*? this plant appears in every low wet & damp situation, on margins of swamps, rivers & ditches from 2 to 3 feet high, flower through the whole of the autumn until the frost destroys it, this is the great Medicine of the Sioux Ind. the long (black root) has an astringent aromatic taste. 423. *Chelone glabra*. The only plant I found of this species is the preserved specimen out of a swamp, in the borders of the Woods. with 424. *Polypodium* associated with (406.) *Syngenesia*. 425. *Peltanthus fol. lance. acumin.* This is again but apparently a plant ex omnibus locis. - In the dry prairies it remains a low 1 foot high, the lower it is situated the higher it is more vigorous & luxuriant is its habitus on the first it has generally 1 flower. and in the rich bottoms 4-5 feet high & branched with many flowers - with 426. *Aster fol. amplexicaule* - *lance. acuminat. flor. coerule. bilaciniis*. 427. *Aster* from the limestone quarry of Mr Sibley below the establishment. - this is the most beautiful species, found on the gravelly & high ridges of the Coteau des Prairies. generally 8-12 inches high & much diffused & branched, with rose bilacine flowers. (See description lower down)

- Post Aster 233. (Another descript. given before.) Radical leaves lanceol. suboppositiate, often acute, 3-5 nerved. (leaves with elevated pellucid nerves, veins re-

[105] verso

Aug. At St. Peter's, Mr. Sibley's Am. Fur Co. Establishment

29

Post Aster 427. Root subligneous, creeping, stem short, straight, often a little flexuous or subdecumbent, terete, glabrous, grayish brown, woody & very brittle, branched, irregularly diverging. leaves sessile, subclasping, cartilaginous serrulate along the margins, scabrous on both sides, one- or obsoletely 3-nerved, most all lanceolate & divaricata. On a young shoot from the root I found the leaves distinct spathulate, & a few of them bidentate at the apex, the stem leaves are all lanceolate and acute, branch leaves much smaller linear lanceolate, suprene & floral leaves still smaller ^{and with the} linear, & dilated towards the apex & slightly incurved. - branchlets very thin & leafy, irregularly spreading. flowers sessile & densely surrounded by leaves which form the outer Perianth. ^{joined} 3 rows of scales linear & long acuminate, carinate at base, scabrous on the margins, upper half & apex green & white & rugose punctate, & reflexed, rays numerous about 30-36. long linear, point reflexed, purple violet: pappus plumose. 4. Limestone Rocks 12-18 inches high.

Toulate, striate, ciliate, caulin leaves very long linear, lanceolate, rigid, twisted and very characteristically marked with two notched teeth towards the point, sessile, patente - diverging, 3-5 nerved, the nerves less elevated, & concrenulate, (*) so that the point appears much sharper. - The suprene leaves narrower & the floral ones merely scales, incurved, very distinct & hispid-ciliate, - Stem very stiff & strict, divided into many flower bearing branches, which form a level-top-corymb, - branches erect from 6-14 flowers, - branchlets 1-flowered, - flowers erect, the branchlets erect, - Anthodium most globular, scales lance-obtuse, closely appressed, patente, - Anthodium most globular, scales lance-obtuse, closely appressed, with membranaceous margins, so that they might be added to the division

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Aug. At St. Peter's Mr. Sibley's Am. Fur Co. Estates

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Aster with scales marked with green dots (by Beck.) - Rays about 20. (*) on scales with two longitudinal confluent green stripes which leave along the centre a light stripe & the membranaceous margins. - Disk bright yellow, after blossom fuscous. 12-14 inches.

Post Aster 426. Caule exaltato, erect, subligneous, ramose, divaricata, terete, canescens, on grayish brown, superior leaves, semi-amplexicaulis, cordata - appendiculata flavo-terete, lanceol., acute, 3-nerved, middle nerve below elevated, both sides ^{short} pilose, margins scabrous, a little undulated or twisted, paler beneath, (if the leaves were petiolated they would appear hastate leaves, except being rounded at the appendages). - Suprene leaves patente, also subundulate, & twisted a little, so the supreme & floral ones, all of them are pulverulent & scabrous on the margins, branches patente, reddish blue, white pilose, at the base of the branchlets flexuose, branches form a convex corymb or clustered panicle, each for itself. - Tastat. flattened, outer row leaf like, about 10, mostly connivent at the base, linear-acuminate, elongate, ciliate, pubescent, striped & reticulate pellucid, and elegantly recurved, inner ones narrower, all nearly even in length - Rays about 80. 3 rows very long, linear obtuse, (point a little darker & reflexed) lined or dark striped, - Disk orange yellow, - this beautiful species grows among the hazel bushes, on hill slopes with the rough Solidaginea Monardia oligope. & others. Woods border. - Aster serotinus Willd. 428. On the inundated bottoms along the Mississippi Boltonia glabrifolia? Hdg. Gentiana minuta Damp lights, Rocky damp or even dry situations frequently among bushes mouth of St. Peter river.

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Augt At St. Peter's Mr. Sibley's Am. Fur Co. Estab.

Augt At St. Peter's Mr. Sibley's Am. Fur Co. Est.

30. 430. *Aster* caule erecto, subflexuoso, nemuloso, purpureo,
glabro vel nitido, - fol. rad. laxis, longe petiolatis
cordato-ovata, acum., basi cordata crenata, supra sec-
tro, subtus pubesci & pallido; marginibus subbris; pe-
tiolis elong. canaliculi convoluti. Scabio-fimbriatis
fol. super. petiolis decurrent. palea pilosa, basi crispata
subtuscula. - fol. superne. Sem. ^{erecta} patent. lanceolat.
acuminata - fol. superne. serrata, linear-lanceol. acu-
minata. - ramificat. et inflor. ex parte pyramidis
panical. axill. petanter diverg. foliosa, - ramea.
lis secundis; pedunc. 1 floribus, ramulis callegendis
exaratas. - anthod. subcylindric. squamis dense imbricatis;
appressis, ovatis, acutis; apice viride-guttate, mar-
ginibus membranaceis. Radicis duplicitis, lincribus
obtusis, truncatis & plicatis. - This species varies much
in different portions of its habitat, generally in the
covering & color. The branchlets are beset with flo-
ral leaves, mere scales, which are more or less acute,
peduncles 1 flowered, 1 inch or less long; the lower ones
as common, the longest., branchlets & upper stem fur-
rowed. - perianth. subcyindric, pointed with a dark grey
dot, marginis white membranaceous. - Rays in a double
row about 12 in each. linear obtusum lanceata, with 2
foliis, dark with about 12 to 15 florets, a little revolute
golden yellow. Among hazel bushes, in the Woods, in
deep shades, often very abundant, & I believe the
same species appears in the open Prairies under a
different habitat. - 18 to 24 inches high. -

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31. 431. Stem erect, branched. - rad. leaves - long petiol-
is, petioles canaliculate & concreted often winged,
winged, villous-fimbriate, the winged substance
with longitudinal parallel yellowish veins base,
distinct cordate, lanceolate acuminate, dentate
serrate, or only serrate, at the base entire &
often crisp, pubescent above, pale & white oil
lous underneath, reticulate, nerves & veins per-
cidi - Superior leaves with more broadly winged petioles
narrowed & contracted near the base of the leaves
ovate acuminate, about 5-needled, regularly serrate
from the middle; - Superior & supreme leaves wi-
thoud distinct petioles; a little contracted tow-
ards the base, all the leaves diverging, floral leaves
minute, lance-acute or acuminate, those of the
perianth scaly, curved, & a little undulate. Rami-
fication pyramidal forming the panicle, bran-
ches divergent, forming little regular panicles; no
camules. diverging from the branchlets, 1-4 flowered
anth. cylindric, scales long linear acute or acum.
with the points a little loose, and a dark green
upper half and whitish membranaceous margins.
Rays in a single row, elliptic, linear, truncate,
2-plicate, blue lilac, about 10?, a little revolute,
florets of the Disk about 12, golden yellow. with
the former, but none in dry gravelly soil, & open
warm situations, borders of dry Woods, - (The upper
part of the stem subulate, and at the axils of
the leaves pubescent, in the woods the stem is often
villous.

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8 Sept. At St. Peter's Mr. Tibley's Am. Fur Co. Est.

1. 432. *Aster*, Stem erect, robust, stiff, ramose foliolose, green purplish shining, upper part & branches pubes., & a little sulcate. (rad. leaves decayed;) Superior leaves lax, divaricately-pinnatisect, sessile, long-lanceolate, acuminate, serrate, remotly & unequally serrate from the mid- undulate & crispous towards the base; nerves & veins reticulate, yellowish; - Superior & Supreme leaves the same but patente-divaricating; branches patente, forming a pyramidal panicle; branch-leaves uniform sessile, erect-patente or patente-divaricating, narrow, lance-acute & acuminate. Branchlets again forming a panicle, 1-5 flowered, beset with floral leaves, semi-lanceol. minute, incurved acute; - perianth. Dilated, with many oily scales linear, tabulate-acuminate, most of equal length, Rays in one row, a great many, linear obtuse, most white, a little plicate, regular & generally very perfect, a little recurved; Disk with about 25 florets, golden-yellow, - all the leaves are of a fine green without any covering, & with scarious margins, paler beneath. - On Road sides & high brushy situations.

At Mr. Tibley's Am. Fur Co. Establishment
Sept. St. Peters.

2. 433. *Solidago*, caudex caespitose; Stem erect, ring ato, flexuous, square & subablate, squares often a little reflexed pilose, the rest of the stem shining; Cauline leaves subcordate, ovate, acuminate; Decurrent down the petiole, incisely & acutely dentate-serrate, dark green above, paler & white pilose beneath & more or less diverging; - upper leaves lanceolate, more acute, serrulate in the middle; Superior leaves lanceol. entire, divergente-divaricata, entire, smooth. - Floral leaves short, minute, subulate. Inflor. intrafoliacus, paniculate spiked; racemules axillary, elongated (lower ones), upper ones short, erect-patente, with the flowers single or in pairs. - Scales spreading & lanceolate obtuse, with a light green stripe along the mid-px. perianth. cylindric. - florets of the rays 5-6 - rays elliptic-oblong, 2 pliate, - florets of the disk about 9. - Hairs spreading & exerted, golden yellow. - Borders of woods; Shady banks of streams never in open sunny situations, & easily distinguished by its leafy spiked panicle, by its soft membran. leaves & dark green foliage in general, a very ornamental plant. -

From St Peter's to Lac D'Esprit under
the guide of Mr. Nicollst.

Sept 14. Left St Peter's at 12 o'clock at noon.—
from the top of the high bluffs near St Peter's a
little variety of Aster (426) Ast. serotinus. with
434. Gentiana 5 flora. with the G. oxinita & 435. G.
ochroleuca. all of them appear more or less fre-
quent along the margins of lakes & woods, rivers.
under white & red oak. — On the table land is
the Ceph. corollata abundant, but this time of
flowering is gone. — We passed at sunset Castle-
Rock reached Vermillion River at 8 o'clock in
the evening, having travelled a distance of about
15 miles, Weather fair S.W. 0-10 o'clock at night —
Th = 43.0. — A beautiful Aurora borealis —

* No Oaks.

From Vermillion to Cannon River.
(Yan bus data. Watapah.)

Sept. 15. Crossed Vermillion River at 6 h 30 m -
crossed a very extensive prairie, including
several small & muddy rivers. covered with
rough grasses — 436. Solidago, foliis angustis
conduplicatis replicatis. glaberrimus. floribus
corymbosis compactis aureo. — 437. Arundo
the common Reed of the Swamps. — At
6 h 20 m we arrived at Cannon River. — The banks
are now richly timbered at the crossing place
the soil is poor & sandy ^{the hills are} & gently sloping
down to the River. — Here were all those plants
together which generally are found on dry sandy
soils — Solid. pyram. & lunata. Gent. viridis
Seponaria on the top of the shrubby bluffs.
lower down is Gent. ochroleuca abund. with
Prenanth. Leptastaria. & Pren. cernua? Cyathium
prinoides with ripening seeds also Eryngium
aquaticum, is scattered abundantly. Liatris micro-
stach. mostly gone, the variosa in some flowers
yet. — The Agrostideae & Papal. with most ripe
seeds. Peltianth. (345.) — No. Every species of
Aster in flow. Weather fair, cloudy in the
afternoon, S.W. 18 miles. from Vermill. River.

From the crossing Place of Cannon River
to Lac (Sokata) (Szura Mde.)

Sept. 16. At the crossing place of Cannon River 438 Aster.
Hem erect, elongate, a little subulate & striate
above and pubescent; panicle remote; - lower
leaves petiolated, petioles broad, membranaceous, mar-
gins convolute, fimbriate at the base, and along
side of the membr substantia. - Lateral of the leaves
unequal, cordate at the base, ovate, undulate, dentate-
serrate, crenate at the base, pubescent & white pilose un-
derneath; upper leaves ovate lanceol. serrulate, su-
perior leaves most entire, patente, peltuvid-reticu-
late, lance-acumin.; floral ones minute, linear;
branches axillary, patente, short, rigid, in a pyrami-
dal panicle arranged, racemes close, subopposite, of
ten axillary, regular small panicles; branchlets
& rachis sharply subulate, rachisules generally
3 flored, peduncles front full of acute scales, on
smaller floral leaves.

We started at 10 o'clock & crossed cannon river at 10th
28^m. the river is about 60 yards wide, 3 feet Water -
& has a very swift current, the timber where it ap-
pears is chiefly Amer. Elm. & White Sess Maple.,
with white & Red Oak on the heights, & Bet. property.
After crossing we traversed a prairie with rough weeds,
& on some damp places the Gentiana 5-flora was
in the most beautiful state of perfection, in company

From Szura Mde through Bois Franc, to
Lai Titanka tanninau.

Sept. 17. Left our Camp at Szura lake at 5th 30 m
entered the high timbered parts or sections of canon
river, what is called by the french Bois franc. - Red
& white oaks, White & Sugar Maples, Black Walnut,
Fraxinus acumin. Lettis occident. are here to be
found in a perfection & health & size which is
not to be found with any timber at the St Peters Riv-
er or the Mississippi about St Peters. Viburnum Op-
bus var edule was in ripe fruit so the Alice, a
species of Cornus. - We had to cut a road through
this magnificent & valuable wood. - Tanthoxylon fra-
xineum is abundant, also Panax 5 flora. Analis his-
suta and radicans, Indigo sp. tabebuia in Seed; when
we got through we stopped at the Prairie for breakfast
439. Aster foliosus. This Aster is on all prairies
abundant & forms a part of the principal colors of
the vegetation. We reached at 3^h 50 m. after a rain
showers the beautiful Lake Titanka tanninau
Weather fair in the forenoon, cloudy & sultry, &
afterwards a rain shower of 2 hours in the afternoon.
11 miles from our last campment.

G. Saponaria, Pedicularis pallida and some few of
Gent. ochroleuca & Saponaria. Reached our
Campment at 5 o'clock, having tramped 15^{1/2}
miles Weather fair. Rain at 8 o'clock in the morning

Observation of the ^{Waiting} Eclipse of the Sun at the
Lake Titanka tanninan, or the Lake of the two an-
cient Villages.

Au.

Sept. 18. Lake Titanka tanninan is very beautiful situated. The place of our camp was at the South end of the lake bordered right & left by the Woods of little consequence, we only had the view of one half of the water sheet, it due account of a high elevated ridge like point at the east bank, which nowerves the extent of the lake at that place, and this, our camping spot no doubt was once the place of one of those ancient villages. Some ruined Indian lodges, build of logs & covered with bark, which are still to be found there are of a more recent time, the level extent of ground as far as the banks are cleared from timber, appear to me as having the ~~sweet~~ appearance of a wasted field, this part however is not large at least not more than 2 or 3 acres, *Digitalis* & *Panicum* & *Marsilea* & chiefly *Shawberries* cover one part of it, *Vitis riparia* is creeping along the sand at the banks of the lake, we found them full of bunches ^{some} of them were very good. - Elsewhere on the sand beach is the *Polygonia* grass again very abundant mixed with the *Euphorbia diversifolia*. the first day & in ripe seed the latter still green with some flowers. - with *Banthium* *Humaria* & *Bidens* (*Hol.*) with *B. conoopsis*? -- One individual of *Pyrus coronaria*. - ~~Minisperm~~ ^{*Minisperm} ~~coated~~ abundant acorns falling - *Artemisia blonmii* gone - *Digitalis* & *Panicum* ripe - *Smilacina naemosa* (of mine) with the ripe scarlet berries on the timbered shady banks ripe!

Liatris
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Lake Titanka tanninan.

Sept. 18. squarrose & *Dioscorea* - *Mamordia* ripe. This day was one of the most beautiful days I remember - The morning sun shone undisturbed excepted by clouds on the beautiful sheet of water calm & serene was the whole atmosphere, the lake appeared like an huge mirror sky blue with its beautiful shrubbery & groups of oaks & lindstræs, ashes on both sides & in the distance, - This picturesque scene was still heightened when a of swans off about 8 or 10 were descending to navigate over this part of their favorite element. - The day passed undisturbed by any inconveniences, and at 1 o'clock we made preparations for the observation of the eclipse. the result of which is with proper meteorological observation reported in the diary of Astronomie obser. of Mr Nicoll. The effect of the eclipse seemed to prolong the day, and as easy & pleasant was the evening after this beautiful & interesting day, which we spent in a very social manner & good humor -

From the South end of the same Lake to the
South West end. the Lake Sakata.

25
Septbr.
19. Left our encampment at 6^h 30^m. The banks
of the Lake are timbered with white & red oak of
small size all around, intermixed with some Ash
and common poplar. The country is very broken
and fertile, we crossed 2 little streams & a
passed over a wide Prairie adjoining & encamp-
ed after the South W. end of the same lake 18 miles
distance - *Gentiana Saponaria* & *fimbriata* abun-
dant with *Pedicularis pallida* - *Liatis fimbriata*
in ripe seeds - *Gentiana angustifolia* on dry gra-
velly & high situations. *Lepidium* (303.) & the high
white one (*L. Sturci?*) ripe, also *Aster* (?) (342.) very abun-
dant in the clover ps with ripe seeds - *Lettis occ.* & *Ten-*
thoxylum frax. & *Betula populifol* abundant near the
border Lakes & rivers in the prairie. - *Prunus chikka*
few ripe - Weather fair - 4:40 *Gentiana angustifolia?*
141. *G. Saponaria*. -

From the S.W. end of Lake Titaura tanninan
to Lake Okaman, the Lake Sakata

From Lake Okaman to Lake Wapalak or
Lac aux Racine croche.

Au.

- Sept. 21. Left our encampment at 1^h. 20^m P.M.—
2d. passed again very broken country, swamps
on which elevated borders the Lyptopodium
pubescens was very abundant - whole woods
of *Betula populifolia* 30 feet high & 1½ feet
diameter, so confined is this tree here that
I could not discover any other different tree
for more than 2 miles. We encamped at
5 o'clock, compelled by stormy rainy weather
at an extensive swamp, having travelled 7
miles - SW.

From Lake Okaman to Lake Wapalak
or Lac aux Racine Croche.

- Sept. 22. Left our swampy encampment early in
the morning & reached Lac aux Racine croche
at 10^h 15^m. This lake is full of *Nymphaea*
alba, the roots of which are gathered by
the Indians as winter food, where the
name derives from. We only stopped a few
hours, however, proceeded further about 1 o'clock
P.M. through a very much obstructed wood
which contained large & fine timber, the same
variety as is mentioned about Connan River
we reached Rivière la Pelle at 5 o'clock, after
crossing it we encamped at the opposite side. - The
bed of the river is about 40 feet wide, full of
gravelly banks, current swift but little water
at this season. Its name derives from the
Equisetum arizonicum which grows very
abundant along its banks, called la Pelle
by the voyageurs. - Weather hazy, showery.

From Rivière la Prelle (Tchankaska-sna) to
the River Tchanyushka, a tributary river of
Fremont Fork of the Makato river.

Au.

- Sept.
20. After the necessary Astron. Observations
we left our camp at 11 o'clock A. M. we had
about 1 mile more of wood to cross, after-
ward we reached the high prairie; we pass-
ed Lac aux Prelle, & encamped close by
the Tchanyushka river at the right bank,
where we met a band of Wahpekuteh In-
dians, encamped at the Lac la Prelle —
Gent. angustifolia very abundant on the high & dry
prairie. — 14 miles

From River Tchanyushka to the Makato
River.

- Sept.
24. The Wahpekuteh Indians collected last night
at our camp, returned this morning when
they received their presents of Mr Nicollet
We were detained until 2^h 30^m. when we
started crossed the above river, passed a little
wood of overcup oaks, here we encamped having
travelled 9 miles from our encampment here
Amorpha nana was very abundant around
the borders of the swamps in ripe seed & still
sound green foliage. Weather fair.

From Tchanyushka River to the Makato
River.

Ac

Sept.
25. Left our encampment at the oak wood at 7^h
30 m in the morning - passed 2 summer lodges of
Wahpekatch Indians - crossed Big River, another
tributary stream (30-40 ft wide) which constitutes
Fremont Fork of the Makato. - This river has
timber of middle size, *Tupelo* major, *Hedysarum*
fraxinifol., *Celtis occidentalis*, - after having crossed
the river we reached another high prairie, over
a little lively stream & reached another high
prairie with *G. angustifol.*, *G. saponaria*, & the
Solids (436). - *Sedum major*. - called Sanpitch
Ocicati Mde or Beaver Lake with some oak timber
& at 11^h 30 m we reached again the way with ex-
tensive bottom prairie & woods of the Makato
river, passing through the woods we arrived at 2 h.
45 m & crossed it until 3^h 15 m - here we were
compelled to stop for the want of timber on
our further road. - The river is about 20 yds.
wide at the crossing place, & 3 feet deep in a
canal, - the water is very clear. The bed gravelly
& very swift Current - 447 Aster. Stem erect.
green, shining, grooved branched forming an ast.
cone, at the top - calyx leaves sessile, semiamplexicaule
patente, lanceolate, elongate, long acuminate, revolute
at the base, entire, out of the middle sharply serrulate,
(base undulate,) entire at the point, thick, - narrow
the margins, glabrous on both sides, (softly shining
with a bluish tinge, laevigatus); all other leaves behind
the

At the Makato River.

Sept.
25. 448. *Eriogonum* abundant on the high bank
& gravelly escarpments along the banks of Makato - with
Phacelia (397.) & *Aster salignus* along the shades among the
willows at the Water's edge. - *Oenothera biennis* very
abundant on these escarpments - *Gramine* (446.) *Leristia*
very abundant. - The timber on the left bank along
the coulees is chiefly overcup oak - on the prairies
close by is the same vegetation the above described
Aster is mostly confined to the timbered places & *Solidago*
of the coulees - Among the prairies is mixed with the
willows - *Polygonum convolvulus*, - *Poa septem.*, -
Weather fair. N.W. moderate cloudy evening clear
night. - 9^h 1/2 mile dist. from our last encampment.

same shape, but proportionally longer pointed, points reflexed,
those of the upper stem, the axillary leaves of the branched
are conduplicate, lanceol. acuminate, - The midrib with 3 pelluc-
id lines, with two parallel vein-like nerves on each
side, veins of the leaves reticulate pellucid, - This character
of the nerves & veins is visible on the larger side stem leaves
the higher & smaller ones having only pellucid line along the midrib
but are decidedly 3 veined & also reticulate veined: - Branches all
patente, foliosae, branchlets generally with 1, rarely 2 flowers,
pellucid loose, flowers straight, branch & branchlets generally more green
than the stem & also with the peduncles thickened towards the stem.
Paxanth. stellate, scales lanc. very acute, green & succulent towards the
middle & the apex, whitish & membr. towards the base; base appressed, points recurved;
rays about 24, lanc. obtuse, slightly 2-plicate, revolute, titan colored, - Disk
elevated in the centre, about 20 florets, coriaceous yellow, oftenw. amaranth. -

[125]*

From the Makato River across Coteau Croche
to the Tchanshushka Watapadan or to the
River of the maple trees.

Sept. 26 At 6^h 35^m we started & ascended the Coteau croche a little beautifull group of mountainous hills, crowned with many irregular most conic shaped tops. before we had a wide level prairie to cross - without seeing any thing of timber or woods around us - crossed several dry grassy lakes - On the Coteau croche I found the Aster (427.) very abundant full of very perfect flowers, of a beautiful bilat. purple & orange disk about 8-10 inches high and the apparent stony exposed top on coarse gravel in its immediate neighborhood Liatris ligulistylis & Astragalus assurgens. - The prairies are already in the color of Autumn, only very few flowers are to be found scattered over their vast extent, but all the many is only Gent. crinita, G. angustifolia, G. Saponaria, & G. obovata. Solidago stricta Ad. Aster (447.) Pletianth. (345.) Aster sericeus & Aster 427. which species I have collected also from Mr. Sibley's Quarry St. Peter's where it appeared luxuriant in the conglomerate bushes 10 feet high quite different in habit & Aster foliolosa? from Eupatorium peacocki stem in sheltered swamps. - After we travelled about 20 miles we encamped at the Tchanshushka Watapadan river. Weather cloudy all day, & dull, we stopped at 5^h 30^m.

From Tchanshushka Watapadan to Lake Warhazu and to the Lake Omanku Wita.

Sept. 27 The Tchanshushka river is on that place timbered with Ulmus americana. Fraxinus serrata, but its name refers to sugar maples which are visited by the Sioux in the Spring, it is about 20-30 feet wide & 1 $\frac{1}{2}$ foot deep at that place and with high banks. We left our camp at 7^h 50^m & arrived at 9 o'clock at the crossing place, 3 miles off., where we took the Ast. Obliqua. - here, the high dry gravelly banks were covered with the Gent. angustifol. in the highest state of perfection, the Lepidium (363.) in ripe seeds. - reached Warhazu Lake or Lake of the poplars at 5 o'clock we reached the Lake Omanku Wita or the Lake with the Walnut Island & the Juglans cinerea is abundant on the Island of this lake, some of them are also scattered along the banks mixed with populus grandis. 448. Polygonum with the green common pyramid. Artemisia, in the cloud, with Polanisia gracilis, Potentilla supina, Amorpha fruticosa, & found also plants of this year from the Juglans cincta (187.) along the sandy beach. Weather beautiful. This is a very beautiful lake.

From Lake O'manhu Wita to the Des Moines River.

Sept. 25. We departed from our camp at 7 o'clock in the morning, - went for some hours over a wide prairie - at 9 o'clock we reached two lakes of 1½ mile length each Hde Manyaska, the Lakes of the white cliffs, and before we left a group of Lakes to our right, Hde Okemampidan was the largest (the Lake of the small noon-) timbered sparingly like the former Lakes Pop. grandis. Frax. acumin. We proceeded with great anxiety to reach the Des Moines River to day - at 3 o'clock P.M. we crossed one branch of it (Pike river²) with very high banks, after a continual ascension of hills through very broken country, we came on an extensive plateau, passed several large & beautiful lakes, but very sparingly timbered, full of boulders around the banks - chiefly granite overcup oak & Frax. acumin. Vitis riparia. reached a creek close by the Des Moines River at 7 o'clock in the night, before we had to pass a great ridge with large boulders of granite - Swamps, we were compelled to pass so far to find wood & water. one of the fairest days - cloudy from 5 o'clock P.M. until 8 evening - 25 miles

Visible plants of the prairies - * Aster sericeus. * Aster foliolosa. * Solidago (351.) * Gentiana angustifolia. Astragalus descurainii. Rosa pensylvanica. Anemone ludoviciana? Oryzopsis (112.) Planaria americana. Ceanothus americanus. Anemone (212.) Melianthus (345.) Gramen (328.) Petalost. viol. Petal. candid. Solidago nemoralis. Bit. Silphium pinnatif. Sonchus (326.) Gram. (298.) Liatris microcephala. Liatris scariosa. Liatris ciliata. Gram (336.) Coreopsis tripteris. Baptisia tinctoria? Anemone virginiana. Gramen Polypogon. Rudbeckia ciliata?, Rudbeckia purpurea? Aster (427.) Pedicularis pallid. Poa trivialis Nutt. Penicela erubescens Pitt. Leptandra virginica Nutt. Glyceria sp. Polygonum erectum Muhl. Atriplex arenaria Nutt. Silphium comatum. Tenuinum canad. Rudbeckia digitata. Poa annua bigenis. Galium septentrionale. Polygonum amphioxylum. Glauca Graminea from the basins Leersia oryzoides Scouler.

From Des Moines River over the dividing Ridge of the Waters of the Mississippi & the Missouri to the Great Spirit's Lake.

Sept 26. Left our Camp at 7 o'clock in the morning, after we made one mile we crossed the Des Moines river at 8 o'clock to breakfast & the Astro. Observations, on the left bank, - On the bluffs of the right bank (still) is at that place only 150 yards off) on the slope is the Quercus macrocarpa Nutt. very abundant. 40-50 feet high & about 2-2½ foot Diameter, on the left Bank are very few, perhaps more lower down. Populus grand. of large size & Frax. acumin. The river is 40-50 yards wide 1-2 feet deep in average, full of granite & other boulders, current swift, Water edge embankered with Salix petiolaris. - The bottom weeds are generally with Carex aquatica & Melianthus (425.) - Solidago (351.) the high Carex aquatica foliis longis subint. graphaloides, and the Artemisia foliis longis subint. graphaloides. leaving this place we ascended the dividing Ridge of the Waters of the Missouri & those of the Mississippi, here was again the Rosa pensylvanica very abund. (with the ridge) with Amorpha canescens & Rubus pubescens. Coreopsis tripteris. We reached the D. L. spot at 4 P.M. - Weather fair, high S.E. after sunset

F

At the Great Spirit's Lake. Minni
Wakon.

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All the Great Lakes, including the
October adjacent Lakes.

Oct 11

After 449. *Saxifraga stoloniferaoides*, with 451. *Potentilla*, sp. 452. Gramen. with Graven (317) from 452, with 453. *Phygelius vicinatus* probably the same, collected at Pelican Lakes. - Cyperaceae? 392. Weather stormy S.E. rain at night, but only interruptedly until 1 P.M. midn.

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Oth. Sec O. Sprich

Octobr The Woods & timber Shrubbs &c., around the
L. Lake of the great Spirit. - These Woods are about
12-15 feet above the level of the water mark.
present. - Regular accumulations of granite
gravel, Inauwacke ~~are~~ show the former edge
of the Lake, which are at some places about
500 yards distant from the present banks of
the Lake. - The Woods 1. *Ulmus americana* 2. *Puglans*
canescens, 3 *Fraxinus acumin.* 4 *Celtis occident.* 5. *Tilia*
americana. 6. *Populus grandifl.* 7. *Ulmus fulva*. 8. *Negundo*
fraxinifol. 9. *Sambucus canadensis*. 10. *Berberis* ob-
ovata, 11. *Prunus Chikasaw*. 12. *Vitis riparia*. 13. *Tamus*?
13. *Ribes floridum*. 14. *Ribes glabrum*. 15. *Sabicea* - lba.
Rhus glabra - Stem bluish brown, gray slotted: young branch
over colored or bluish red. Petioles articulated & in sessile clusters
at base, & pulvriulent with the stem opposite & superopposite.
& long tanecol. cadiate leaves equally serrated; green
with alternate rips, one to each serrature; shining
green above, glaucous underneath - Lfts 8 or 9 pairs
+ foot one. # *Ribes floridum* fol. 1-3 lobed, *Spicis* axillaries
1-2 & 3. petiol. foliisque subtus also sericeo pubescentibus -
petiol. hisp. basi plumoso-ciliato - # 16 *Rosa pensi-*
flora. 17. *Smilax* armed, leaves cordate, mucron. 7 nerved,
shining, pulvriulent, ciliis 2 axill. oppos. at the foot of the
petiole, young leaf buds thorn like - pointed & enveloped -
berries in small clusters, umbell like, abundant; ink blue.
Smilax rotundifolia Linnaeus *Rhus radicans*. 20. *Quercus* as a
seed plant. foliis subtristis subnervis pallidis, supra nutris nitidis
sguttatis. - *Smilax* 17 # spinis nigris divaricatis, reflexis, foliis
nervis. subt. hamatis, knowpulis fimbriata short scum +
2. & *Quercus* *striaeformis*. 19. *Equisetum* *atropurpureum* 20 *Symplo-*
cis *caeruleus* nailworts, which is abund. all the way from St Peters.

From Lac O'Erroit to the Des Moines River
over the Dividing Ridge. Return road.

the turn road.

October 3d Left our camp at Lai D' esprit at 12^h 30m proceeded N.E. reached Des Moines River at 60' clock in the evening after crossing we encamped on the right bank, in the narrow timbered bottom, with *Aquatic macroc.* the bluffs along the river on this side are about 80 feet high in some places, with some outcropment, they are gravelly & covered in some places with granite & old red sandstone boulders, with *Linum rigidum*, *Cotent. angustif.*, *Polygonum*, *Paspalum?* & *Oenothera canadensis*, the bottoms full of *Bromus* (308) & *Silphium perfol.* & other rough plants. Weather fair, sky serene. West W. 14 miles

25. *Craetaegus* armed with horizontal spurs like thorns, fol. ova.^{is}, 5-7 lobes
lobes opp.^{osite},) acum.^{ed} & ~~d~~^tntate, serrate, white puberulent underneath, light
green & puberulent above, sometimes the leaves are glabrous, petioles fine long, young
bark white, branches diverging, 15-20 feet high. shady woods - *Craetaegus cordata*
var. *cordata* Ait. 23. *Salix reticulata* fol. longissimum subcres. (shoots & stipulated petioles)
serrate - Sem. at, serratures mucronulatus, mid. p. above subcrenate. below,
elevated, pubesc. serratures sharp & acute as above - young wood brown & red,
brown with whitish dots, old wood ash colored, leaves tinted with orange
tear drop shape, some leaves are palmate, from the sandy banks 455.
Aster salignus. with Aster (426.) Weather fair calm. On rocky damp
places in the wood *Gentiana stellatum*.

From Des Moines River to Lake Okamahidaw
Okamahidaw. ^{Three}
Return road.

Oct. 4. Left Des Moines River at 10^h 15^m passed some lakes & swamps, most all of the same appearance as they are already described - only less timbered, - arrived at 6^h 20^m at the great Lake Okamahidaw - prairies the entire appearance of the late autumn - only S. angustifol. - *Baptisia tinctoria*? abundant on elevated situations but all the seed destroyed by worms. - also *Porophyllum canescens* abundant, but dead & off from their roots weather fair. W. 45 miles from our encampment.

From Lake Okamahidaw to the River
of the Lakes Bidder. ^{Three}
Return Road.

Oct. 5. We took the necessary astron. observations, & left our camp at the Lake Okpd. at 6^h 30^m in the morn. passed along side of the immense & beautiful lake which is in some places well timbered & fortified with large accumulations of boulders on its banks, - Ulm. amer. & fulva, *Tilia amer.* with *Anemone manicata* some *Fragaria* abund. constitute the timbered banks - some parts are more extensively timbered & they appear like timbered bottoms, at 11 o'clock we reached another extensive lake still better timbered but more wood-like with very large Elm & Oaks. - Cat. card. & viol. abundant. - *Eryngium aquaticum* & *Beaumontia amer.* abund. 450. *Eupatorium pubescens*, & *Crataegus cordata* Ait. - A square island with syc & maples where the blind go to in the spring. - Beautiful scene very & very broken country, a great many prairies islands of Park savanna.) We reached one of the branches of Des Moines River at 4^h 52^m crossed it & ran up the opposite timbered heights. Weather fair. W. 35, 0" at noon. 17 miles distant.

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460. *Spiranthes cernua* Richard. Root ~~tuberos~~^{tuberous} - ~~tapetum~~^{tapetum} -
(horizontally) warty contracted, scape erect, short, stiff, covered
with appressed lance-acute or acuminate sheaths, which are
lined & glabrous, spike dense, flowers cernuous, bracts
lanceolate & long acuminate, lip elliptic? entire, mar-
gins a little involute crisped and crenulate, ~~sub~~^{sub}-
ciliolate; outer segments lanceolate, diverging, co-
lumn carinate, obtuse. — From the sandy hills near
Embarass River, Sept. Found by Mess Fremont &
Flandin - 6-10 inches high, has a very agreeable & strong
scent. Description from dried specimens -
whole plant glabrous.

461. *Solidago*. ^{erect} Stem robust, elongate, terete, sulcate, leafy and pubescent above, corymbose paniculate divided above. leaves lanceol. (sessile) acuminate, more or less diverging, entire, or appressed incisely-serrate, often ~~dentate~~^{acute}-serrate, hamous hispid on both sides; 3 nerved, reticulate yellowish veined, nerves subvillosus underneath, branches, ~~with~~ the branchlets form a pyramidal panicle; more or less regular, and compose a conglobata panicle, racemules ^{short, horizontal.} remain so little reflexed with the point peduncles, filiform, 1-3 flowered, white pubescent with the branchlets & upper stem. perianth cylindric scales ~~few~~^{*} rays short. - Floral leaves very minute long. subulate. + lanceolate, obtuse, divaricato. linear-lance acute loose-imbricated, yellow obsoletely greenish tined, whitish margined.

S. procera. [132] H Peters.

462. *Solidago*. caule ericeto glabro, subcylindricum,
dividet in a panicle at the top. - Stem leaves
sessile, diverging, broad lanceolate, acuminate, at-
tenuated at the base, ^{appressed incisely} serrate often dentate - serrate
from the middle towards the apex, glabrous on both
sides, or scabrous ^{& paler} beneath, margins scabrous, few
leaves white-ciliate, branchlets divaricately recum-
ed, racemules short and ~~approximata~~, recurved. In lodium
cylindric, scales unequal, linear ^{subacute} - ~~obtus~~ white
membrane ^{subfimbriate} areous, with 2 greenish confluent nerves toward
the apex (peduncles and lower scales pubescent), rays
short, divaricata, elliptic, with 3 confluent light lines,
Pappus plumose.

Pappus plumose.
463. Arbutus Uva Ursi, caule lignoso ~~ramoso~~^{ramoso} pro-
strato, foliis alternis, secundis, petiolatis, obovalis,
glabris, ^{superne nitidis} glaberrimis, coriaceis, reticulatis, (ramis, prostratis,
foliosis), marginibus ciliolatis,
~~articulatis~~ articulates

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foliosis), marginous
452, Gramen ^{Root articulates} Root geniculate, ~~fibrous~~ ^{scabrous} in, fasciculate,
finely and densely fibrillate, very villous, wiry, lignous,
white, stem geniculate, articulate, joints proliferous, root
ing, leaves sheathing the stem, Sheaths sulcate, white silky
filiate, much longer so ~~at~~ ^{at} the base of the leaf, which
is jointed, spreading, linear, long acuminate, with a conti-
nuingous & pellucid scarious margin, pointed; granule re-
gular, pyramidal, lower branchlets divaricate or horizontal
~~racematus~~ ^{filiform} spikelets generally 3 flowered, spikelets one-flowered
with the racemules, ^{racematus} ~~racematus~~ glumes paleae 2, unequal, both cari-
allied short peduncled, ^{glumes paleae} 2, unequal, both cari-
one of them very small, the other longer than the nates,

with scabrous lines on keels, inner valves like the outer
ones scabrous, all acute. — *Poa spectabilis* Pursh.
Solidago 436. — Stem erect, stiff, foliaceous, ~~tomentose~~, ^{lined} glabrous,
leaves equitant, spreading from the base, flatate, con-
acute conduplicate, scabrous along the margins, about 5-nerved
radical ones very long, ^{or,} attenuate towards the middle,
branches, spreading, sheathed from their base by axillary
leaves, subterete, with sessile opposite lanceolate, mu-
cronulate, appressed leaves; racemellous clusters at the
top of the branches, pedicels narrowed, pubescent. scales
of the anthers ^{lance ovate} few, obtuse, one-nerved, fimbriate, sub-
sugose; rays linear obtuse short, saffron yellow. —

Vermillion River (Sioux country
territory)

498. *Polygonum*, stem erect, ^{terete} zigzag & branched, herb or shrub
flexuous, striate, grooved; (branches & leaves) stipulated
branches spreading, subterete, slender, ^{mostly} undivided; ^{hastatulæ} stipules
white membranaceous laciniate, leaves subsessile, lanceolate
acute or ~~acute~~ acuminate, upper stipules not laciniate;
nut sharply triangular, brownish black, shining. Flowers
axillary, solitary or in pairs.—Sandy banks at Spirit
Lake.

Physalis 453. Root creeping, Stem prostrate and as-
cending, flexuous, suberect, pubescent, leaves petioled,
with their sides ^{in unequal pairs} unequal slightly decurrent down the petiole, broad,
acute, serrate-dentate, nerves & veins white tomento-
us, fruit with the peduncles pendulous, calyx vesiculæ.
glandular pubescent, reticulate, teeth short acute,

conspicuously ciliate, being reddish yellow.—
464. *Aster Pinnatus*, Root thickened, contracted with few
radicles, Stem solitary or several. Headed, winged,
branched, bracts almost shining yellowish brown;

Eupatorium. - stem erect, branched, terete, pubescent,
leaves petiolated, opposite, 3 angular cordate, acuminate,
coarse serrate, subscabrous along the margins, diver-
gent; petioles canaliculate by the slightly divergent
sides of the leaves, pubescent with the under sides
of the ^{upper} leaves; branches opposite spreading divergent,
their leaves shorter petiolated, racemes corymbose at
the top, pedicells pubescent, elongated, with filiform
scales on floral leaves; scales of the anthod, ^{cobtus} linear
3-nerved, curved pubescent, membranaceous, margins
conspicuously fimbriated, seed black ~~tetragonal~~ ^{pept} skin-
ny. Pappus marginal elongated, applanated.

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455. rame eretto, foliis, paniculato-nervosis, ^{foliis}, Sabiceo,
cato glabro, foliis sessilibus ~~adspicatis~~ ^{adspicatis} plexis.
obtusis, elongatis acuminatis, medias serratis, gla-
berimis, marginibus scabris; ramis subintegris;
ramis axillari bus patentibus, brevibus pubescentibus,
flori feris; floribus apice confertis, pedunculis brevibus
pubescentibus; anthodio imbricato, squamis linearibus
subacutis marginibus albo-membranaceis fimbriatis
apicibus viridibus; Pigidio numerosis linearibus obtusis
brevibus albis.

467. *Darlingtonia*, radice incassata, carnoso-lignosa, ^{herba} ~~subflexuosa~~, exerta, elongata, ramosa, angulato-nervosa, glabra, sublignosa, medullosa, foliis bipinnatis, multijugis; petiolis generalibus. In canaliculis, angulis marginibus pilosiusculis, basi petiolum ^{inferiorum} ~~sub-tenue~~ partialium glandulosis, partialibusque apicillare acutis; foliolis valde-approximatis, subsessilibus (basi obliquis) et oblongo-lanicolatis, obtusis acutis, ciliolatis, crenatis, stipulis filiformibus elongatis; ramis extenti-divergentibus, ^{angustatis} ~~caeruleo~~ floriferis; floribus axillariis percurrentibus, divergentibus, elongatis, crenatis, rigidis floribus, ~~flavis~~ ^{flavis} ~~vernas~~ ^{vernas} ~~vernas~~ floribus subsessilibus, egeminibus turbinato-conformatis, foliatis, acutis, 3-5 spec. mixt.

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Vegetation of the Mountain Island in the
Upper Mississippi. October

This place exhibits a great variety of subalpine plants. At the foot of the rock close to the water the common *Quercus rubra* & *Ulmus americana* & *U. fulva* constitute the principal trees, like in the other bottom woods in that region, and with *Cornus stolonifera* as the most prevailing undergrowth; besides that is the *Spiraea laurifolia* very abundant and at this full of its bunches or umbels of black berries, in the midst of its dense foliage. The lower rock, shaded by the trees is covered with *Polypodium vulgare* interspersed with *P. phegopteris*, bushes of *Vaccinium uliginosum* var. *alpinum* ^{Mitch.} hanging immediately above it on the nearly perpendicular rocks, still nearly in full blossom — up to the height of about 80 or 100 feet the *Pinus strobus* fills up the intervals of the mount, and as they are sheltered by the rock the are larger than in any other place I saw on the banks of the Mississippi. — At the foot of those graceful pines, the *Chimaphila corymbosa* of Rush, and *Goodyera*

besiens form scattered groups, among them also the *Hieracium mariannum*, at this time the first was with ripe fruit the upper Rocks more exposed to the weather was full of different ferns, among which the *Asplenium rhizophyllum* Willd. and *Pteris atropurpurea* Linnae with a few plants of *Arabis laevigata* Camb. — On other parts of the lower rocky intervals *Pyrola rotundifolia* & *elliptica* with their evergreen leaves were covering the ground, and at the same place *Monotropa uniflora* was in great abundance. There must be a great variety of orchidaceous plants at that place, I only noticed a ~~wild~~ withered stalks of some species of *Glabenaria*, *Cypripedium* and *Spiranthes* —

Petalostemon villosus Nutt.

This beautiful species of *Petalostemon* I met first at the sandy and elevated prairies at the Traverse des Sioux, close by the fort of the Am. Fur Co. where it is notices already on

other page. After we left that place I never saw it again for the whole first journey. On our second trip to Lat d'esprit I searched for it with great care but nothing was to be seen of it, nor was there any such sandy hills in the whole country until we reached Vermillion River on our return road, there, on the top of castle Rock hill, on the almost loose on drift sand, I found it in great abundance & perfection in ripe fruit, with *Amorpha canescens* & *Arbutus Uva Ursi*, *Poa pestinata* & others more common plants. Again I missed it in the whole neighbourhood of St Peters on the left bank of the Mississippi, & down the Mississippi, as far as one mile below Riviere aux embarras, on the bastions of drifts sand of Carver's and Featherstonaug's fortifications of the accients, and here again in abundance and with *Glechoma* among whole fields of *Gleastrum hygrometricum*, often solitary in the Prairies with *Amorpha canescens*. The last time I found it on the drift sand hills on the left bank of Lake Pepin. —

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